

Introduction to the “Limited Site Investigation Report Seattle Public Utilities North Recycling and Disposal Station” conducted by AMEC Earth & Environmental, July 8, 2008

What’s the Background on the Site?

- The City of Seattle has operated a 4.27-acre solid waste transfer station in the Fremont/Wallingford area since 1967, collecting recyclables and solid waste dropped off by Seattle households, businesses, and collection trucks. A neighboring property, the Oroweat Baking Company site at 1550 N. 34th Street, was bought by the City in 2005 to support modernizing the transfer station facilities.
- For many years, vehicles have entered the site and unloaded their solid waste into a concrete-enclosed area below grade. Recyclables are stored at the ground surface and shipped off to recycling facilities. Waste materials are removed from the collection area daily and moved offsite for disposal. Annually the City removes the asphalt layer over the concrete floor of the collection area and disposes of it, laying a new and clean asphalt floor.

What are the Plans for the Site?

- Plans are in place to demolish the existing structures and build a new transfer station and recycling facility. The new transfer station would be built to current standards, enclosing operations more completely to minimize odor, dust, and noise and offering opportunities to improve site lighting, landscaping, and traffic management. The majority of recycling, employee, and administrative facilities would be located at the Oroweat site.

What Does the Report Say?

- In this report, the City contracted with an independent environmental firm to sample and analyze soil and groundwater on the NRDS and Oroweat properties to help characterize the degree of any potential contamination that may currently exist from years of solid waste operations or previous site uses. The soil and groundwater samples were analyzed for petroleum hydrocarbons (oils), volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs) metals, pesticides, herbicides, polychlorinated biphenyls, and (PCBs). There were no detections for pesticides, herbicides, or PCBs. The findings regarding petroleum hydrocarbons, VOCs, SVOCs and metals revealed nothing unusual for a site of this type. Highlights of the report include:
 - The study found traces of diesel and oil in soil, with one soil sample at the uphill background location along the north site boundary at a level exceeding state cleanup standards for lubrication oil.
 - Out of about 200 parameters analyzed in groundwater only two parameters (volatile organic compounds [solvents]) were detected

in one location that exceeded the most stringent state cleanup standards.

- There were no detections of semi volatile organic compounds or metals that exceeded the most stringent state cleanup standards.
- The Oroweat property has long been known to have gasoline and diesel fuel contamination in soil beneath the existing building resulting from truck fueling and storage, which remained after earlier regulatory cleanups of contamination. In addition, during a prior underground storage tank removal and cleanup project, some petroleum contaminated soil was left near a retaining wall by the southern perimeter of the NRDS facility because the soil could not be removed without compromising the stability of the wall.

As indicated in the SEPA checklist and DNS, a plan for removal, treatment, and/or other management of contaminated soil and groundwater on these sites will be developed prior to construction, with appropriate worker safety, management of contaminated material, and equipment decontamination. SPU will work with permitting and regulatory agencies as appropriate.

How Will You Find Out What Happens?

- SPU will keep the community posted through website updates, and e-mails to our e-mail list.

Talk to Us at Any Time

- If you have questions you can contact Jeff Neuner at (206) 684-7693
- You can also email us at Newstations@Seattle.gov. If you would like to receive any email updates, please send us your email address.
- The webpage with facility updates can be found at www.seattle.gov/util Type in "Facility Update" in the search field to find a link to the Facility Update page.

LIMITED SITE INVESTIGATION REPORT

Seattle Public Utilities North Recycling and Disposal
Station

1350 and 15050 N ~~North~~ 34th Street
Seattle, Washington 98103

Submitted to:

Seattle Public Utilities
707 South Plummer Street
Seattle, Washington 98134

Submitted by:

AMEC Earth & Environmental, Inc.
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July 8, 2008 revised March 26, 2009

AMEC Project No. 8-915-16341-0



July 8, 2008 revised March 26, 2009
8-915-16341-0

Seattle Public Utilities
707 South Plummer Street
Seattle, Washington 98134

Attention: Juan Carlos Ramirez

Subject: Limited Site Investigation Report
Seattle Public Utilities North Recycling and Disposal Station
1350 and 15500 ~~N~~North 34th Street
Seattle, Washington 98103

Dear Mr. Ramirez:

AMEC Earth & Environmental, Inc. is pleased to submit the results of the Limited Site Investigation study for the above-referenced property located in Seattle, Washington. This report has been prepared for the exclusive use of the Seattle Public Utilities and its attorneys, for specific application to this project, in accordance with generally accepted environmental practices.

We appreciate the opportunity to work with SPU on this project. If you have any questions or desire further information, please feel free to contact the undersigned at (425) 368-1000.

Sincerely,

AMEC Earth & Environmental, Inc.

Cherilyn Inouye
Project Manager

Meg Strong, LG
Senior Associate

Attachments

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EXECUTIVE SUMMARY

AMEC Earth & Environmental, Inc. (AMEC) is pleased to present this revised Limited Site Investigation Report which was requested by the Seattle Public Utilities (SPU) Materials Laboratory. This report replaces the July 8, 2008 version, and revisions are noted in strike-out and underlined text. This report summarizes the results of an environmental investigation conducted at the properties located at 1350 and ~~1500~~ 1550 ~~N~~North 34th Street, Seattle, Washington 98103 (Site). The purpose of this Limited Site Investigation is to conduct a preliminary screening of the Site soil and groundwater to evaluate if these media have been impacted by current and historic activities onsite and evaluate if these contaminants pose a health risk to future construction workers. At the request of the SPU Materials Laboratory, AMEC collected soil and groundwater samples which were submitted for environmental analyses during geotechnical drilling operations performed by SPU during March 2008. This report presents AMEC's observations, subsurface investigation data, laboratory analytical results, and conclusions from this March 2008 investigation.

AMEC understands that SPU is considering expansion options for the North Recycling and Disposal Station (NRDS). Therefore, future potential receptors on the Site would include construction workers and facility operations personnel. The exposure pathways of the Site's future chemicals of concern, and of its current receptors, are: direct contact, inhalation, and ingestion.

The Site is located in the North Lake Union area of Seattle. Land use in tThe area surrounding the Site is characterized ~~with~~ as a mix of light industrial, commercial, and residential development. The Site consists of two tax parcels separated by a north-south public road (Carr Place ~~N~~North). Four one-story buildings are present in the western portion of the Site which has been occupied by the SPU NRDS (1350 ~~N~~North 34th Street) since 1967.

A multi-story building is present in the eastern portion of the Site (~~1500~~ 1550 ~~N~~North 34th Street) which is currently vacant. Oroweat Baking Company formerly owned and occupied this portion of the Site until 1998. Previous environmental investigations conducted on the former Oroweat property indicate that the soil and groundwater on this property have been impacted by a release of petroleum fuel and solvents associated with the fueling and maintenance of trucks on this property.

During this investigation, five soil borings were advanced using a hollow stem auger drill rig. Three of the soil borings were located on the NRDS property, and two of the soil borings were advanced on the former Oroweat property. Soil samples were collected from each of the soil borings with the exception of ~~No soil samples were collected from boring B-2,~~ located on the former Oroweat property. The three soil borings located on the NRDS property were completed as monitoring wells. Groundwater was not encountered during the advancement of the soil borings on the former Oroweat property so no monitoring wells were installed.

~~Soil borings advanced d~~During this investigation ~~encountered~~ fill materials was observed in the soil borings at from the ground surface ~~ranging in thickness from 0 to~~ a maximum depth of 7

feet. The fill materials generally consisted of silty sand with gravel. The fill materials are underlain by glacial till which consists of dense to very dense fine to medium sand with silt and gravel.

Groundwater was encountered during drilling at depths between ~~approximately between~~ 9 to 15 feet below ground surface (bgs). Groundwater levels in the three newly installed monitoring wells was approximately 7 feet to the top of casing (TOC) in two wells at the floor level of the transfer station (MW-1 and MW-2) and approximately 13.5 feet to the TOC in MW-3 which is located at the northern edge of the NRDS and approximately 15 feet higher topographically. Groundwater flow is expected to follow the slope of the topography to the southwest.

To evaluate the potential impacts of current and former Site operations to the Site soil and groundwater, at least one soil and groundwater sample was collected from four of the five soil borings advanced on the Site and analyzed for Site chemicals of potential concern (COPCs), which include: petroleum-range hydrocarbons, volatile organic compounds, semi-volatile organic compounds, metals, polychlorinated biphenyls, and pesticides/herbicides. With the exception of a faint petroleum odor observed in soil boring B-3, no soil staining or petroleum odors were observed during this investigation.

Results from this limited Site Investigation indicate that COPCs are present in the Site soil and groundwater. The limited number of COPCs detected in both the soil and groundwater onsite suggests that the effects of each COPC to human health and the environment may be evaluated against the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup levels (CULs) for Unrestricted Land Use. For COPCs that have CUL values for both the MTCA Methods A and B, the values listed under Method A were used in this evaluation. If a COPC did not have a Method A CUL value, then the Method B value was used in this evaluation.

In the Site soil, oil-range hydrocarbons was the only COPC to be detected above the MTCA Method A CULs. No COPCs were detected above Method B CULs where there were no Method A values for soil. The elevated concentration of oil range hydrocarbons was reported in one soil sample collected in boring B-5 near the northern property perimeter located approximately 15 feet higher in elevation than the floor level of the main building. Because the sample was collected from a location hydraulically upgradient from the facility's operations, the source of the petroleum may potentially be from an offsite source.

In the Site groundwater, the following chlorinated solvents were detected: tetrachloroethene (PCE), 1,1-dichloroethene (DCE), and 1,2-dichloroethane (DCA). In addition, low levels of gasoline constituents were detected in the central area of the Site. No COPCs were detected above MTCA Method A CULs or Federal/State MCLs. One COPC (1,1-DCE), which did not have a MTCA Method A CUL, was detected in a concentration above the MTCA Method B CUL. No other COPCs were detected above Method B CULs if there were no value for the MTCA Method A CUL.

The PCE was detected in the upgradient monitoring well MW-3 located along the Site's northern perimeter, and the eventual daughter (breakdown) products of PCE (DCE and DCA) were

detected in a monitoring well MW-2 located in the southeastern corner of the 1350 North 34th Street property. The presence of these COPCs in the groundwater indicates that there may have been a release of solvents near or upgradient of the well locations. Low levels of gasoline constituents were also detected in the groundwater in the central area of the Site. These detections indicate that there may have been a localized release of gasoline onsite.

~~Results from this limited Site Investigation indicate that COPCs are present in the Site groundwater in concentrations below Washington State Department of Ecology (Ecology) Model Toxics Control Act Method A cleanup levels and Federal Maximum Contaminant Levels for drinking water, and oil range hydrocarbons are present in the Site soil in concentrations above Ecology Method A cleanup levels. The elevated concentration of oil range hydrocarbons are present in an upgradient location adjacent to a public street and utility corridor which suggests that the source of the petroleum release may be from an offsite source. In addition, the presence of the COPCs (petroleum compounds, constituents of fuel, and solvents) in the groundwater indicates that there may be a release of these compounds near or upgradient of the soil and groundwater sample locations.~~

In addition, the 15500 NNorth 34th Street property has a restrictive covenant due to the presence of gasoline and diesel-impacted soil and perched groundwater remaining below the building footprint. If future development plans include demolition of the building or disturbance of the petroleum-impacted soil, Ecology is required to be notified, and the diesel-impacted soil will be required to be managed as a potentially hazardous waste petroleum contaminated soil.

On the basis of the results of this investigation, it is AMEC's opinion that the following actions be conducted onsite:

1. If the soil below the 15500 NNorth 34th Street building will be disturbed, Ecology should be notified in accordance with the property's restrictive covenant, and a soil management plan should be prepared. The purposes of the plan is to address would be 1) to address worker safety monitoring and hazard prevention in the known contaminated areas onsite; and 2) to prepare site-specific proposed plans to segregate, manage, and dispose of contaminated soil; and equipment decontamination.
2. If the NRDS is to be demolished, it is recommended that additional soil and groundwater samples be collected below building foundations in areas where floor drains are located. Gasoline constituents were detected in the Site groundwater in concentrations below MTCA CULs and State MCLs. The presence of the gasoline constituents in only one of the three monitoring wells indicates that a localized source may be present within the main building. If the NRDS is to be demolished, it is recommended that additional soil and groundwater samples be collected below building foundations in areas where floor drains are located. The presence of the gasoline constituents in the groundwater in the central area indicates that there is a release of gasoline onsite.
3. Should development plans include the demolition of the NRDS building located in the southeast corner of the 1350 North 34th Street property, the soil below the building and the electrical subsurface utility line connecting this building to the main building should

be evaluated for the presence of petroleum, specifically gasoline and diesel. A lens of petroleum-impacted soil was reported in these areas in 1994 during the removal of two underground storage tanks. Locate and review all documents pertaining to the former underground storage tanks (USTs) Where practical, the petroleum contaminated soil was removed. However, to maintain the structural integrity of two retaining walls and a building structure, the cleanup activities did not remove all of the petroleum contaminated soil onsite. on the NRDS property and evaluate the extent of the reported petroleum release associated with the USTs. Following this evaluation, the UST area may require additional environmental investigation and remediation to achieve closure from Ecology. This Additional cleanup of the Site soil could be conducted in conjunction with Site redevelopment.

4. Collect groundwater samples from the three of the existing wells during the dry season to monitor the presence of VOCs, specifically the solvents and gasoline constituents in the groundwater. The purpose of the groundwater evaluation is to assess the effects of seasonal variation and to confirm that the VOCs, solvents, and gasoline constituents have remained at levels below Ecology MTCA Method A CUL ~~cleanup~~ levels.
5. Evaluate the extent of the elevated oil-range hydrocarbons detected along the northern property boundary.
6. Survey the elevations of the top of casing in the monitoring wells onsite. The groundwater gradient onsite may be calculated following completion of this survey.

The preceding summary is intended for introduction and reference only. A complete reading of this report is recommended.

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**LIMITED SITE INVESTIGATION REPORT
NORTH RECYCLING AND DISPOSAL, SEATTLE, WASHINGTON
JULY 2008 REVISED MARCH 2009**

8-915-16341-0

1.0 INTRODUCTION

AMEC Earth & Environmental, Inc. (AMEC) is pleased to present this revised Limited Site Investigation Report which was requested by the Seattle Public Utilities (SPU) Materials Laboratory. This report replaces the July 8, 2008 version, and revisions are noted in strike-out and underlined text. This report summarizes the results of an environmental investigation conducted at the properties located at 1350 and 15050 North 34th Street, Seattle, Washington 98103 (Site). The purpose of this Limited Site Investigation was to conduct a preliminary screening of the Site soil and groundwater to evaluate if these media have been impacted by current and historic activities onsite and evaluate if these contaminants pose a health risk to future construction workers. At the request of the SPU Materials Laboratory, AMEC collected soil and groundwater samples which were submitted for environmental analyses during geotechnical drilling operations performed by SPU during March 2008. This report presents AMEC's observations, subsurface investigation data, laboratory analytical results, and conclusions from the March 2008 investigation. This report is also a companion document to the Seattle Public Utilities *Geotechnical Data Report Solid Waste Facilities Master Plan (SWFMP): Subsurface Data Collection, Phase 2 North Recycling and Disposal Station (NRDS)*.

It is AMEC's understanding that the purpose of this initial investigation was to conduct a screening of subsurface Site chemicals of potential concern (COPCs).

2.0 SITE BACKGROUND

It is the understanding of AMEC that SPU has owned and operated a solid waste transfer station on the 1350 North 34th Street property since 1967 and has recently purchased the 15500 North 34th Street property which is located east of the ~~waste~~ transfer station. Both properties have been used for commercial and light industrial purposes since the 19260's.

2.1 Site Location and Description

The Site is located in the North Lake Union area of Seattle. ~~The Land use in the area~~ surrounding the Site is characterized ~~with as~~ a mix of light industrial, commercial, and residential development.

The Site consists of two adjoining tax parcels (Parcel numbers 2264500450 and 4083306930) and has an approximate area of 5.18 acres. Carr Place ~~NNorth~~, a north-south public road, separates the two properties. The Site is bordered to the north by ~~NNorth~~ 35th Street followed by residential homes and L&O Distributing in the northwest; to the east by Woodlawn Avenue ~~NNorth~~ followed by residential homes and the Essential Baking Company; to the south by ~~NNorth~~ 34th Street followed by Institute for Systems Biology, Yogi Way, Northwest Lighting Service, JS Jefferson & Plaster, and Impart Media Group; and to the west by the Kite Shop, Subway Restaurant, and Offshore Store (Figure 2).

Four ~~one-story~~ buildings are present on the 1350 ~~NNorth~~ 34th Street property (North Recycling and Disposal Station [NRDS]). These buildings include:

- a 58,804-square foot ~~building~~warehouse used to ~~temporarily store~~transfer solid waste, ~~(transfer station)~~, constructed in 1967,
- a 351-square foot equipment shop building constructed in 1967,
- a 600-square foot office constructed in 196794, and
- a 1,200 square foot shed constructed in 1994.

One multi-story building is present on the 15500 ~~NNorth~~ 34th Street property. It is currently used by SPU for various recycling activities and occasional meetings~~vacant and was formerly occupied by Oroweat~~.

According to topographic data available on the King County Tax Assessor web site, Site elevations range from 75 feet above mean sea level (msl) in the northeast corner of the Site (1500-1550 ~~NNorth~~ 34th Street property) to approximately 30 feet above msl in the western corner of the Site (1350 ~~NNorth~~ 34th Street property) (Figure 3). The topography of the NRDS property (1350 ~~NNorth~~ 34th Street), which most likely originally sloped to the southwest towards Lake Union, has been altered to accommodate construction of the solid waste transfer~~handling~~ facility. In order to create a flat surface for the building footprint, a portion of the hillside in the eastern half of the property was removed resulting in steep embankments along the northern and eastern edges of the Site. All four sides of this property slope towards the approximate center which represents a topographic depression.

Surface soil is exposed in landscaped areas along the perimeters of both properties and also along the driveway entrances to the NRDS property (1350 ~~N~~North 34th Street). Surface water on the property is anticipated to either infiltrate the unpaved areas or flow overland towards stormwater catch basins onsite and south and southwest of the Site. The stormwater catch basins discharge to the sanitary sewer.

2.2 Current Use of Site

SPU has operated a solid waste transfer station on the western portion of the Site, NRDS property (1350 ~~N~~North 34th Street) since 1967. Residential and commercial customers may drop off their solid waste and recyclable materials at the facility. According to Mr. Ken Armstrong the Director of SPU Solid Waste and Field Operations, solid waste and recyclable materials brought to the facility are placed into the main ~~warehouse~~transfer building “~~the pit,~~” and large bulky items (e.g., tires and household appliances) are temporarily stored on a paved surface in the northeast portion of the property. The solid waste is removed from the facility daily and ~~disposed of offsite in Oregon~~transported to a permitted disposal facility, and the ~~recyclable~~ing materials are removed from the facility periodically, dependingent on storage space.

Mr. Armstrong also indicated that a nonprofit agency and a tenant store building materials in the building on the eastern portion of the Site, on the former Oroweat property (15050 ~~N~~North 34th Street). In addition SPU periodically conducts meetings in the office area of the building.

2.3 Previous Environmental Investigations

Prior to the field investigation, AMEC reviewed 7 reports provided by SPU regarding the property located at ~~1500-1550~~ 1550 ~~N~~North 34th Street (former Oroweat property ~~also listed with street address 1550 N 34th Street~~). On May 14, 2008, AMEC also reviewed environmental records on file for the Oroweat and NRDS properties at the Washington State Department of Ecology (Ecology) Bellevue office.

A review of the reports and Ecology file indicates that a truck maintenance facility was present on the Oroweat property. Three underground storage tanks (USTs) containing diesel, gasoline and waste oil were installed on the property by 1968. Releases from these USTs were suspected to be the sources of petroleum contamination in soil and groundwater on the property which was first detected in 1992. In addition to petroleum hydrocarbons, chlorinated solvents such as perchloroethylene (PCE) and trichloroethane (TCA), used for parts cleaning during truck maintenance activities, are suspected of being released as these chemicals have also been detected in soil and groundwater on the property.

Several episodes of remediation activities have been conducted on the Oroweat property including the excavation and removal of petroleum-contaminated soils, in-situ contaminated soil treatment by geo-oxidation using electro-chemical oxidation, localized groundwater treatment with hydrogen peroxide and in-situ soil and groundwater treatment with hydrogen peroxide. In March 2001 Ecology issued a No Further Action Letter and Restrictive Covenant for the property. Under the terms of the Restrictive Covenant, Ecology mandated notification in the event that soil or groundwater below the Former Oroweat property was to be disturbed and or

the removal of any contaminated media. In November 2003, Urban Redevelopment LLC submitted a Voluntary Cleanup Program Remedial Closure Report to Ecology followed by quarterly groundwater monitoring reports completed in 2004. The results of the 2004 groundwater monitoring indicated that the detected concentrations of the chemicals evaluated were below Ecology cleanup levels. A letter from Ecology to SPU (February 17, 2005), stated that Ecology did not require additional groundwater monitoring on the Oroweat property. This letter did not modify any other conditions or requirements of Ecology's "no further action" determination, including the Restrictive Covenant filed with King County on March 28, 2001. An updated Restrictive Covenant to reflect the no further action determination for the Site was not in the Ecology file reviewed by AMEC.

AMEC also reviewed Ecology's environmental file for the NRDS property located at 1350 North 34th Street and the North Recycling and Disposal Station Site Characterization and Cleanup Report (Herrera 1997) prepared after the decommissioning of two USTs onsite. The Ecology file contained a "UST Closure and Site Assessment Notice" and a "UST Notice of Confirmed Release" filed in 1994. One 10,000-gallon UST formerly containing diesel fuel and one 3,000-gallon UST formerly containing gasoline and later diesel fuel were permanently removed and disposed off-site. Reportedly, the USTs were ~~present onsite in 1960~~ installed in 1967. According to the 1997 cleanup report, During the UST removal, petroleum-impacted soil contamination was observed during the removal of the USTs. The petroleum-impacted soil was excavated to the practical extent possible. However, to maintain the structural integrity of two retaining walls and a building located in the southeast corner of the property, all of the petroleum-impacted soil could not be excavated. Consequently, petroleum-impacted soil was left in-place in the southeast corner of the property. Observations recorded during the cleanup activities described the impacted soil in the southern excavation sidewall as a "2 to 3 inch (gray-stained soil lens) 2 to 3 feet wide."

On June 10, 2002, Ecology requested additional information regarding site cleanup activities from the City of Seattle. The Ecology letter stated that the current status of the Site is "Cleanup Started" and additional information is needed. Ecology was concerned that petroleum hydrocarbon contamination may migrate under the public road (road not specified). No records reporting concentrations of diesel- and oil-range TPHs in soil and groundwater and the extent of contamination were available for AMEC's review at Ecology.

Ecology's files also contained a regular correspondence between Ecology and the City of Seattle pertaining to the solid waste permits and annual reports dated 2005, 2006, and 2007. No violation of solid waste handling at the site was recorded.

2.4 Geology and Hydrogeology

Seattle lies within the Puget Sound Lowland, an elongate structural and topographic basin bordered by the Cascade and Olympic Mountains. The geology of the Seattle area is dominated by a complex, alternating, and incomplete sequence of glacial and interglacial deposits that rest upon an irregular bedrock surface. Post-glacial sediments are poorly consolidated, as much as 300 meters thick in deep alluvial valleys and susceptible to ground failure during earthquakes. (Troost et al, 2003).

Based on recent regional geological mapping, surficial geologic conditions at the Site consist of artificial fill materials overlying Pleistocene glacial drift deposits of the Fraser Glaciation. Glacial drift underlying fill materials at the Site consist of the Vashon till. The artificial fill materials ~~are described as~~ observed onsite include a mixture of gravel, sand, and silt, ~~concrete, garbage, slag and other materials of substantial areal extent or thickness (>2 meters) placed as a result of human activity.~~ The Vashon Till is described as a compact diamict of silt, sand and subrounded to well-rounded gravel, glacially transported and deposited under ice. Commonly fractured and containing intercalated sand lenses, the Vashon Till generally forms undulating elongated surfaces. The upper 1 meter of the till is generally weathered. The unit is described as dense to medium dense (Troost et al, 2005).

Soil borings advanced during this investigation encountered fill materials at the ground surface ranging in thickness from 0 to 7 feet. The fill materials generally consisted of silty sand with gravel. The fill materials are underlain by glacial till which consists of dense to very dense fine to medium sand with silt and gravel. In addition, an exposure of the Vashon Till was noted in the hillside just north of an electrical transformer in the west central portion of the Site. The outcrop is in an area that was excavated for placement of the transformer.

Groundwater was encountered during drilling at depths between approximately between 9 to 15 feet bgs. Groundwater levels in the three (MW-1, MW-2, and MW-3) newly installed monitoring wells was approximately 7 feet to the top of casing (TOC) in wells at the floor of the transfer station (MW-1 and MW-2) and approximately 13.5 feet to the TOC in MW-3 which is located approximately 15 feet higher topographically. Groundwater flow is expected to follow the slope of the topography to the southwest.

3.0 SOIL AND GROUNDWATER INVESTIGATION

This section discusses the subsurface investigation performed by AMEC between March 10 and 14, 2008. AMEC collected soil and groundwater samples from four of the five soil borings advanced on the Site. Description of the sample collection and field observations are presented below, and the analytical results of the environmental samples are presented in Section 4 of this document.

3.1 Analytical Program for Soil and Groundwater

To evaluate the impact of current and former Site operations to the Site soil and groundwater, at least one soil sample was collected and analyzed from each boring for the Site COPCs which include: petroleum range hydrocarbons, volatile organic compounds (VOCs), semi-VOCs (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides, and herbicides.

3.2 Soil Sample Collection

Soil samples were collected from 4 soil borings (B-1, B-3, B-4 and B-5) advanced to a maximum depth of 30.3 feet bgs using a hollow stem auger operated by Gregory Drilling, Inc. of Redmond, Washington. A geotechnical boring, B-2, was also advanced on the Site; however environmental samples were not collected from this boring.

As illustrated on Figure 3, the soil borings were spatially distributed evenly across the property and also placed strategically downgradient of current potential source areas. Relatively undisturbed subsurface soil core samples were collected at 2½ and 5-foot intervals by driving a 1½-foot-long, 2-inch-diameter split-spoon sampler. Following sample collection, soil samples were visually inspected and field screened for VOCs using an organic vapor meter (OVM) equipped with a photo-ionization detector (PID). In each soil boring, SPU personnel recorded a description of the soil lithology. AMEC's field observations were added to SPU's soil boring logs which are presented in the SPU Materials Laboratory geotechnical report.

Soil samples submitted to the laboratory were selected on the basis of field observations and soil recovery. One soil sample in each soil boring, except B-2, was selected for laboratory analyses. Due to the large volume of soil required for analyses from each boring, AMEC collected soil samples from multiple intervals. A faint petroleum odor was noted in the 2.5 to 4-foot sample obtained from soil boring, B-3. However, no PID measurements above background levels were observed in any of the ~~borings subjected to the PID~~ soil samples checked by AMEC.

Soil samples were placed into laboratory-prepared containers. Soil samples to be analyzed for volatile petroleum constituents (e.g., total petroleum hydrocarbons [TPH] in the gasoline range and VOCs) were collected using a soil core syringe and inserted into a pre-tared 40-millileter (ml) VOA vial in accordance with EPA Method 5035. Samples to be analyzed for non-volatile analyses (e.g. metals, SVOCs, pesticides/herbicides, and PCBs) were collected in new 4-ounce soil jars. Samples were sealed, labeled, and placed in a cooler with ice for transport and delivery to the analytical laboratory under proper chain-of-custody.

3.3 Monitoring Well Installation and Development

Soil borings B-1, B-4, and B-5 were completed as two-inch diameter monitoring wells (MW-1, MW-2, and MW-3, respectively). Groundwater was not encountered in B-3, therefore a monitoring well was not installed. The monitoring wells were installed to monitor groundwater elevations and to assess potential impacts of contaminated soil on the Site to groundwater beneath the Site.

Ten-foot sections of slotted PVC screen were installed between 10 and 20 feet bgs in MW-1 and MW-3 and between 5 and 15 feet bgs in MW-2. During drilling, groundwater was observed at depths ranging from 9 to 15 feet bgs. A filter pack size compatible with the well screen was installed by gravity in the annulus of each borehole. The filter pack enclosed the screened section of the well and extended at least 1 foot above the top of the well screen. Bentonite chips were placed to form a seal extending from the top of the filter pack to approximately two feet bgs, and a traffic-rated flush mount well cover was placed over the well casing and securely cemented into the ground.

On March 12, 2008 the newly installed wells were developed using a decontaminated surge block and submersible pump to remove fine material and turbid water from the wells. The static water levels in the wells ranged between approximately 5.5 feet and 13 feet ~~bgs~~ below the TOC during the well development. To develop the well, the surge block was thrust up and down the screened interval for a period of approximately 10 minutes. Following surging, the submersible pump was placed into the well to remove the turbid water. Three cycles of surging and purging were conducted in each well. All three of the wells pumped dry during well development; however, well development continued until three well volumes were removed or the well was purged dry three times. Water quality measurements recorded on field forms during the well development are presented in Appendix A.

3.4 Groundwater Sample Collection

Groundwater samples were collected from the three monitoring wells on March 14, 2008. To ensure that the groundwater samples collected were representative of the aquifer, groundwater from the permanent wells was purged prior to sample collection using a peristaltic pump with disposable tubing. Groundwater was removed at a low flow rate (approximately 300 milliliter per minute [ml/min]). At regular intervals, the purged water was monitored for temperature, pH, specific conductivity, turbidity, dissolved oxygen, and oxidation-reduction potential using a Horiba U-22 water quality meter. These parameters are recorded on groundwater sampling field forms which are included in Appendix B. The well purging was completed upon stabilization of water quality parameters defined as two readings within 10 percent of the previous measurement. It should be noted that the dissolved oxygen meter malfunctioned during the groundwater sample collection. Consequently the dissolved oxygen measurements were not evaluated to determine the stabilization of groundwater parameters.

Groundwater samples to be analyzed for TPH in the gasoline range and VOCs were collected in 40-ml VOA vials pre-preserved with hydrochloric acid; samples to be analyzed for SVOCs, herbicides, pesticides, and PCBs were collected in unpreserved 1-Liter amber bottles; and samples to be analyzed for metals were collected in 500-ml plastic bottles. Immediately

following collection, samples were sealed, labeled, and placed in a cooler with ice for delivery to the analytical laboratory under chain-of-custody protocols. The groundwater samples to be analyzed for metals were filtered in the laboratory and preserved prior to analysis.

3.5 Equipment Decontamination

Following each soil sampling interval, the sampling equipment was cleaned and decontaminated using a scrub brush and non-phosphate detergent solution followed by a deionized-water and isopropyl alcohol rinse followed by air-drying. Decontamination liquids and rinsate were containerized and stored onsite as investigation-derived waste (IDW).

3.6 Investigation Derived Waste

Two waste streams were generated during drilling activities (soil cuttings and decontamination liquids/purge water). The IDW was segregated by matrix, placed into 55-gallon drums, labeled, and stored on the Site in the northeast corner of the NRDS property (1350 ~~N~~North 34th Street). Four soil drums and two liquid waste drums were generated during the March 2008 investigation. On the basis of the analytical results, ~~it is anticipated that this~~the IDW will bewas disposed of as non-hazardous waste.

4.0 SITE INVESTIGATION RESULTS

This section presents the overall findings of the AMEC Site investigation. The results of the laboratory analyses of soil and groundwater samples collected during AMEC's investigation are summarized below and are presented in Tables 1 through 14. All tables are located at the end of this report, and the analytical laboratory data reports are presented in Appendix C. The soil analytical results discussed in this section have been preliminarily screened against values of the Ecology Model Toxics Control Act (MTCA) Method A and B cleanup levels (CULs) for Unrestricted Land Use ~~and Method B CULs~~. The groundwater analytical results were preliminarily screened against Federal/State Maximum Contaminant Limits (MCLs) for drinking water, ~~and Ecology MTCA A and B CULs for Unrestricted Land Use, and MTCA B CULs~~.

4.1 Soil Analytical Results

The laboratory results for soil samples collected are discussed below and are summarized on Tables 1 to 7. During the March 2008 investigation, soil samples were analyzed for one or more of the following: TPH gasoline by NWTPH-Gx, TPH diesel by NWTPH-Dx, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270D-SIM, metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using EPA 6010/7471, herbicides by EPA Method 8151, pesticides by EPA Method 8081A, and PCBs by EPA Method 8082. The results of these analyses are presented below.

4.1.1 Total Petroleum Hydrocarbons

Four primary and one duplicate soil sample were analyzed for gasoline-, diesel-, and oil-range hydrocarbons using NWTPH Gx and Dx. The results for the TPH analyses are presented on Table 1 and Figure 5. Gasoline-range hydrocarbons were not detected in the soil samples in concentrations above the laboratory detection limits. Diesel range hydrocarbons were detected in only one soil boring, B-1, at a concentration of 150 milligrams per kilogram (mg/kg). Lube oil range hydrocarbons were detected in three primary and one duplicate soil sample. Detections of lube oil ranged from 110 mg/kg in B-4 to 2,700 mg/kg in B-5. Per WAC 173-340, the sum of the diesel and oil-range hydrocarbons exceeded the MTCA Method A CUL of 2,000 mg/kg for diesel and oil in the soil samples collected from B-5 at 7 feet bgs. No other detections of petroleum hydrocarbons exceeded MTCA Method A CULs.

4.1.2 Volatile Organic Compounds

Four primary and one duplicate soil sample were analyzed for VOCs using EPA Method 8260B. The results for the VOCs are presented on Table 2. Three VOCs (acetone, ~~tetrachloroethene~~ PCE, and toluene) were detected in one or more soil samples. None of the VOCs were detected above the MTCA Method A or B CULs.

4.1.3 Semi-Volatile Organic Compounds

Four primary and one duplicate soil sample was analyzed for SVOCs using EPA Method 8270D SIM. The results for the SVOCs are presented on Table 3. Four SVOCs (bis[2-

ethylhexyl]phthalate, di-n-butylphthalate, phenanthrene, and pyrene) were detected in one or more soil samples. None of the detections exceeded the MTCA Method A and B CULs. It should be noted that the laboratory detection limit for n-nitrosodimethylamine (0.035 mg/kg) exceeded the MTCA Method B CUL of 0.02 mg/kg. N-nitrosodimethylamine was not detected in any of the soil samples. Because it is typically associated with rocket fuel, n-nitrosodimethylamine is not anticipated to be present in the soil onsite.

4.1.4 Metals

Four primary and one duplicate soil sample were analyzed for arsenic, barium, cadmium, total chromium, soluble hexavalent chromium, lead, mercury, selenium, and silver using EPA Methods 6010B and 7471A. A summary of the analytical results is presented on Table 4. Barium and total chromium were detected in all of the soil samples. The detected concentrations of these metals were below their respective MTCA Method A and B CULs.

4.1.5 Pesticides

Four soil samples were analyzed for pesticides using EPA Method 8081A, and a summary of the analytical results are presented on Table 5. The pesticide compounds were not detected above laboratory detection limits in these samples.

4.1.6 Herbicides

Four soil samples were analyzed for herbicides using EPA Method 8151, and a summary of the analytical results are presented on Table 6. The herbicide compounds were not detected above laboratory detection limits in these samples.

4.1.7 Polychlorinated Biphenyls

Four soil samples were analyzed for PCBs using EPA Method 8082. A summary of the analytical results are presented on Table 7. The PCB compounds were not detected above laboratory detection limits in these samples.

4.2 Groundwater Analytical Results

The laboratory results for the groundwater samples collected from the three newly installed monitoring wells are discussed below and are summarized on Tables 8 to 14. During the March 2008 investigation, groundwater samples were analyzed for: TPH gasoline by NWTPH-Gx TPH diesel by NWTPH-Dx, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270D-SIM, metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using EPA 6010/7471, herbicides by EPA Method 8151, and pesticides by EPA Method 8081A. The results of these analyses are presented below.

The groundwater analytical results were preliminarily screened against Federal Maximum Contaminant Limits for drinking water, Ecology MTCA A CULs for Unrestricted Land Use, and MTCA B CULs for Unrestricted Land Use.

4.2.1 Total Petroleum Hydrocarbons

Three primary and one duplicate groundwater sample were analyzed for gasoline, diesel, and oil range hydrocarbons using NWTPH Gx and Dx. The results of the TPH analyses are presented on Table 8. Petroleum-range hydrocarbons were not detected in concentrations above the laboratory detection limits in the samples.

4.2.2 Volatile Organic Compounds

Three primary and one duplicate groundwater sample were analyzed for VOCs using EPA Method 8260B. The results of the analyses are presented on Table 9. Ten VOCs were detected in one or more samples. None of the detections exceeded Federal MCLs for drinking water or MTCA Method A CULs (where available). The detections of 1,1-dichloroethene (DCE) in MW-2 (31 µg/L); 1,2-dichloroethane (DCA) in MW-2 (3.4µg/L); and ~~tetrachloroethene~~PCE in MW-4-3 (0.810 µg/L) exceeded the MTCA Method B CULs for these VOCs (Figure 6). No other detections exceeded the screening criteria.

The laboratory detection limits for three compounds (1,1-dichloroetheneDCE, 1,2,3-trichloropropane, and 1,2-dibromo-3-chloropropane) exceeded their respective MTCA Method B CULs. 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane were not detected above laboratory detection limits in the groundwater samples collected.

4.2.3 Semi-Volatile Organic Compounds

Three primary and one duplicate groundwater sample were analyzed for SVOCs using EPA Method 8270D SIM. The results are presented on Table 10. Two SVOCs (di-n-butylphthalate and pyrene) were detected in one or more groundwater samples. None of the detections exceeded Federal MCLs for drinking water or MTCA Method A and B CULs.

It should be noted that the laboratory method detection limit of the following eight compounds exceeded the MTCA Method B CULs: 1,2-diphenylhydrazine; 3,3'-dichlorobenzidine; benzidine; bis(2-Chloroethyl)ether; hexachlorobenzene; hexachlorobutadiene; n-nitrosodimethylamine; and pentachlorophenol. These compounds were not detected above the laboratory detection limits in any of the groundwater samples.

4.2.4 Metals

Three primary and one duplicate groundwater sample were analyzed for dissolved arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver using EPA Methods 6010B and 7471A. A summary of the analytical results is presented on Table 11. Barium was detected in the groundwater samples collected from MW-1 and MW-3. The detected concentrations did not exceed Federal MCLs for drinking water or MTCA Methods A and B CULs. No other metal was detected above laboratory detection limits.

4.2.5 Pesticides

Three primary and one duplicate groundwater sample were analyzed for pesticides using EPA Method 8081A, and a summary of the analytical results are presented on Table 12. No pesticide

compounds were detected above the laboratory detection limits. It should be noted that the laboratory detection limit for aldrin exceeded the MTCA Method B CUL.

4.2.6 Herbicides

Three primary and one duplicate groundwater sample were analyzed for herbicides using EPA Method 8151, and a summary of the analytical results are presented on Table 13. No herbicide compounds were detected above the laboratory detection limits.

4.2.7 PCBs

Three primary and one duplicate groundwater sample were analyzed for PCBs using EPA Method 8082. A summary of the analytical results are presented on Table 14. No PCB compounds were detected above the laboratory detection limits.

5.0 QUALITY ANALYSIS / QUALITY CONTROL

A qualitative assessment of the soil and groundwater analytical data from this study is presented in this section. The overall usability of the data was acceptable with respect to the results of the precision, accuracy, representativeness, comparability, and completeness evaluations. Quality control (QC) measures implemented during this study included an assessment of sample handling and management and an evaluation of field and laboratory QC samples.

Field QC samples are collected for laboratory analyses to assess sampling and analytical accuracy and precision, efficiency of sampling equipment decontamination, and potential cross-contamination from the time of sample collection to laboratory analyses. Field QC samples consisted of field duplicates, equipment rinsates, trip blanks, and field blanks. Laboratory QC samples for this investigation consisted of method blanks, laboratory duplicates, laboratory control samples / laboratory control sample duplicate (LCS/LCSD) and matrix spike / matrix spike duplicate (MS/MSD) samples. The 90% project data quality objective for valid measurements was met for this project. In general, it is important to recognize that no analytical data are guaranteed to be correct, even if all QC audits are passed. Strict QC serves to increase confidence in data, but any reported value may potentially contain error.

5.1 Sample Handling and Management

All samples were stored in a cooler with bagged ice and securely maintained in AMEC's possession under chain ~~and~~^{of} custody protocols. All samples were received at Onsite Environmental in good condition at a cooler temperature of 4°C, which was within the EPA guidelines of ≤6°C. All samples were analyzed within the EPA-recommended maximum holding time of 14 days for soils and preserved samples for VOCs, SVOCs, TPHs, PCBs, pesticides, and herbicides; and within 28 days for metals.

A review of the laboratory data indicates the following data reporting issues at the laboratory:

- Sample B-5_6 had an internal standard for volatile analysis that was outside the control limits. The laboratory states that for B-5_6 the results and the corresponding Practical quantitation limits (PQLs) from bromobenzene onward should be considered estimates. It should be noted that the 19 VOCs following the bromobenzene were not detected above the laboratory detection limits in sample B-5_6, and the PQL values for the 19 compounds are below the MTCA A and B CULs.
- The laboratory reported that sample B-4_6 had interfering compounds that may be masking the presence of acetone.
- The laboratory reported that the toluene in samples B-1_5, B-3_3, B-4-6, B-5_6, and B-5_7 may be present due to cross contamination during storage. In AMEC's professional opinion, the toluene results from samples B-1_5, B-3_3, B-4-6, B-5_6, and B-5_7 should be used with caution due to the absence of other compounds usually associated with toluene contamination.

- 4,4'-DDT and Methoxychlor recoveries in the continuing calibration verifications (CCV's) were low; therefore the results in the samples for these compounds are biased low and maybe greater than reported. These compounds were not detected above the laboratory detection limits in the soil or groundwater samples.

5.2 Field QC Samples

Field duplicates were collected at a rate of 10% per media (e.g. groundwater and soil). Three duplicate soil samples and two duplicate groundwater samples were collected and analyzed. The field duplicate samples were analyzed using the same analytical program as the primary samples. It should be noted that due to limited sample volume, no duplicate samples were analyzed for herbicides, pesticides, and PCBs. A review of the laboratory data indicates that duplicate pairs showed precision within Quality Analysis Project Plan (QAPP)-specified limits with the following exception.

The field duplicate B-5_7 was collected at the same location as B-5_6. The percent deviation between the acetone and ~~tetrachloroethene~~PCE recoveries is greater than the acceptance limit of 40% for soils at 63% and 121%. The acetone and ~~tetrachloroethene~~PCE results should be considered estimated.

One equipment rinsate sample, EB-1, was collected for this field effort. The rinsate was collected by pouring deionized water over a decontaminated split-spoon sampler (soil sampling equipment). The rinsate water was then poured directly into laboratory containers. No target compounds were detected in the soil equipment rinsate sample. Because disposable groundwater sampling (bailers and dedicated tubing) was utilized, no equipment rinsate was collected for the groundwater sampling equipment. No target compounds were detected in the soil equipment rinsate sample blank with the following exception:

- Equipment Blank EB-1 had detections of methylene chloride at 2.5 µg/L, chloroform at 1.7 µg/L, and diethylphthalate 1.9 µg/L. These chemicals were not detected in the associated samples; therefore data usability was not impacted.

Trip blanks and field blanks were collected daily, and following review of the preliminary laboratory data, select trip and field blanks were analyzed for volatile compounds (EPA method 8260B and/or NWTPH Gx). No target compounds were detected in the trip blank samples, or the field blanks with the following exceptions:

- ~~Equipment Blank, EB-1, had detections of methylene chloride at 2.5 µg/L, chloroform at 1.7 µg/L, and diethylphthalate 1.9 µg/L. The associated samples were non-detected for methylene chloride, chloroform, and diethylphthalate; therefore data usability was not impacted.~~
- A field blank, Field blank_3, had a detection of chloroform at 1.2 µg/L. Consequently, ~~t~~The detection of chloroform in sample MW-2 at 0.66 µg/L should be considered non-detect.

- The trip blank, TRIP BLANK 2, was not analyzed for vinyl acetate. This compound was not detected in the associated samples ~~were all non-detect for vinyl acetate~~; therefore data usability was not impacted.

5.3 Laboratory QC Samples

The samples are processed in batches of less than 20 samples per QC set. The QC sets requirements vary by method, but generally consist of a method blank, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), matrix spike (MS) and a laboratory duplicate or matrix spike duplicate (MSD).

Blank samples are aliquots of analyte free water or Ottawa sand that are used as negative controls to verify that the sample collection, storage, preparation, and analysis system does not produce false positive results.

LCS recovery and precision are an indication of the laboratory's ability to successfully perform an analytical method in an interference-free matrix. MS recovery and precision are an indication of the laboratory's ability to successfully recover an analyte in the matrix of a specific sample or closely related sample matrices.

Laboratory duplicate LCSD, and MSD recovery and accuracy are an indication of the laboratory's ability to recover an analyte consistently. Surrogate spikes are used to evaluate accuracy, method performance, and extraction efficiency in each individual sample. The laboratory QC was within QAPP-specified limits for all parameters in the QAPP.

6.0 DISCUSSION OF RESULTS

Results from this limited Site Investigation indicate that COPCs are present in the Site soil and groundwater. The limited number of COPCs detected in both the soil and groundwater onsite suggests that the effects of each COPC to human health and the environment may be evaluated against MTCA Method A CULs for Unrestricted Land Use. For COPCs that have CUL values for both the MTCA Methods A and B, the values listed under Method A were used in this evaluation. If a COPC did not have a Method A CUL value, then the Method B value was used in this evaluation. In addition, COPC detections in groundwater were also screened against Federal and State MCLs.

Diesel- and oil-range hydrocarbons, phthalates, and metals were detected in the Site soil on the NRDS and former Oroweat properties; and ~~tetrachloroethene~~ PCE was also detected in one soil boring on the NRDS property. Results from this investigation indicate that oil-range hydrocarbons is the only COPC to be detected above the MTCA Method A CULs. No COPCs were detected above Method B CULs where there were no Method A values. Because the Site soil does not appear to be impacted by multiple chemicals of concern, detections of the COPCs have been evaluated against MTCA Method A CULs in this section. VOCs, SVOCs, and barium were observed in the Site groundwater. Results from this investigation indicate that no COPCs were detected above MTCA Method A CULs or Federal/State MCLs. One COPC (1,1-DCE), which did not have a MTCA Method A CUL, was detected in a concentration above the MTCA Method B CUL. No other COPCs were detected above Method B CULs if there were no value for the MTCA Method A CUL. Because the Site groundwater appears to be impacted by few chemicals of concern, the groundwater COPCs have been evaluated against MTCA Method A CULs (where available) and Federal MCLs in this section.

6.1 COPCs in Site Soil

Soil samples were collected in three areas of interest onsite. One soil boring (MW-3/B-5) is located north and hydraulically upgradient of the NRDS facility operations. One soil boring (B-3) was advanced on the former Oroweat property boundary downgradient of a fuel (diesel and gasoline) and chlorinated solvent release. Two soil borings were advanced on the NRDS property downgradient of the waste transfer station facility (MW-1/B-1) and near storage buildings (MW-2/B-4). No soil samples were collected from boring B-2, located in the southern portion of the former Oroweat property.

6.1.1 Upgradient Soil Boring

One upgradient soil boring, B-5 was advanced in the landscaped area along the northern boundary of the Site (~~Figures 3 and 4~~). No staining or petroleum odors were observed in this soil boring. Oil-range hydrocarbons were detected in concentrations above MTCA Method A in the sample collected at a depth of 7 feet bgs (Figure 5). The source of the oil-range hydrocarbons is not known, and on the basis of the location of the boring and the inferred groundwater gradient onsite, the source of the oil-range hydrocarbons is suspected to have originated from an offsite source. The stormwater pipe system located north and upgradient ~~from~~ of the boring is a potential source.

~~It should be noted that tetrachloroethenePCE~~, a chlorinated solvent, was also detected in the 7-foot soil sample collected from boring B-5. The detected concentration of 0.005 mg/kg is below the MTCA Method A CUL of 0.05 mg/kg, and therefore this detection of ~~tetrachloroethenePCE~~ does not pose a human health risk (Figure 5). However, the presence of ~~tetrachloroethenePCE~~ indicates that a release of chlorinated solvents has occurred near the area of the soil boring or upgradient of the soil boring. The source and lateral extent of the ~~tetrachloroethenePCE~~ release is not known. The stormwater line north and upgradient from the boring is a potential source.

Acetone, toluene, di-n-butylphthalate, barium, and chromium were also detected in concentrations below MTCA A CULs. These COPCs are not anticipated to be chemicals of concern because of the following reasons: common laboratory contaminant (acetone), suspected to have originated in the laboratory container (toluene), suspected to be associated with the oil-range hydrocarbons but not at a concentration of concern (di-n-butylphthalate), and naturally occurring (barium and chromium).

6.1.2 Former Oroweat Property

One soil boring, B-3, was advanced east and downgradient of a petroleum and chlorinated solvent release (Figure 3). A faint petroleum odor was observed in the soil sample collected at 3 feet bgs. Although this soil sample was analyzed for total petroleum hydrocarbons, VOCs, and SVOCs. No COPCs ~~was were~~ detected in concentrations exceeding MTCA Method A CULs, and therefore, the detected concentrations of these COPCs do not pose a human health risk. The following COPCs were detected: diesel and oil range hydrocarbons, toluene, di-n-butylphthalate, phenanthrene, and pyrene. ~~It should be noted that w~~With the exception of the detection of toluene, the presence of these compounds are suspected to be associated with the release of diesel compounds from LUSTs removed from the eastern area of this building. The detection of toluene is suspected to have originated in the laboratory container.

6.1.3 NRDS Property

Two soil borings were advanced on the NRDS property (B-1 and B-4) in the downgradient and downslope areas of the property (Figures 3 and 4). Low concentrations of oil-range hydrocarbons (B-4 only), acetone, toluene, di-n-butylphthalate, barium, and chromium were detected in these borings. None of these detections ~~exceeded were above~~ MTCA Method A CULs, and therefore the detected concentrations of these COPCs do not pose a human health risk. It should be noted that the detection of oil-range hydrocarbons indicates that there may be due to the presence of a release of oil-rangeresidual petroleum hydrocarbons remaining onsite after the removal of two USTs formerly located near northeast and southwest of B-4 or upgradient from B-4 (Figure 6). ~~The source and the lateral extent of the oil range hydrocarbons is not known.~~ The remaining detections are not anticipated to be chemicals of concern because of the following reasons: common laboratory contaminant (acetone), suspected to have originated in the laboratory container (toluene), suspected to be associated with the oil-range hydrocarbons but not at a concentration of concern (di-n-butylphthalate), and naturally occurring (barium and chromium).

6.2 COPCs in the Site Groundwater

Groundwater samples were collected from three monitoring wells installed on the NRDS property. One monitoring well is located upgradient of the facility (MW-3/B-5), one monitoring well is located downgradient of the facility (MW-1/B-1), and one monitoring well is located adjacent to storage buildings (MW-2/B-4). Detections of the COPCs in the groundwater are discussed by the location of the wells.

6.2.1 Upgradient Monitoring Well

MW-3/B-5 is considered the most hydraulically up-gradient well on the Site (Figure 3) on the basis of the Site topography. ~~Tetrachloroethene~~PCE and barium were detected in the groundwater collected from this monitoring well in concentrations below MTCA Method A CULs and federal/state MCLs. No COPCs were detected in concentrations above the MTCA Method B CULs when no value was available for the MTCA Method A CULs. ~~Tetrachloroethene~~PCE is a solvent, and its presence in the upgradient well indicates that this compound has originated from an offsite source and may be migrating onto the NRDS property (Figure 6). The detected concentration does not pose a human health risk; however, the source of this chlorinated solvent and the lateral extent of this compound is not known.

6.2.2 Downgradient Monitoring Wells

Two monitoring wells, MW-1/B-1 and MW-2/B-4 are located in the southern portion of the Site. 1,1,1-Trichloroethane; ~~1,1-dichloroethane~~DCA; ~~1,1-dichloroethene~~; ~~1,2-dichloroethane~~DCA; benzene; chloroform; dibromomethane; ethylbenzene; xylene; di-n-butylphthalate; pyrene; and barium were detected in the groundwater collected from one or both of these wells in concentrations below MTCA Method A CULs and federal/state MCLs. One COPC (1,1-DCE) did not have a MTCA Method A CUL, and the detected concentration was above the MTCA Method B CUL. No other COPCs were detected in concentrations above the MTCA Method B CULs when no value was available for the MTCA Method A CULs.

The presence of solvents in MW-2/B-4 (Figure 6) indicates that there may have been a release of solvents near or upgradient of MW-2/B-4, and the presence of ethylbenzene and xylene in MW-1/B-1 indicates that there may have been a release of gasoline near or upgradient of MW1/B1. Potential areas include the NRDS main building and storm drain system. In addition, the solvents detected in MW-2 may be associated with a historic release from a former carpet cleaning operation on the Site which was located east and upgradient of MW-2/B-4 or from the release reported on the former Oroweat property. The carpet cleaning operation is suspected to have been present onsite between 1930 and 1965³⁶ (AMEC 2008).

7.0 CONCLUSIONS AND RECOMMENDATIONS

Results from this limited Site Investigation indicate that COPCs are present in the Site soil and groundwater-MTCA A-CULs. These COPCs include diesel- and oil- range hydrocarbons, VOCs, SVOCs, barium and chromium in the soil; and constituents of gasoline, solvents (VOCs), SVOCs, and barium in the groundwater. Diesel and oil range hydrocarbons were detected in one soil sample at a concentration exceeding MTCA Method A CULs, and the remaining COPCs detected in soil were below MTCA Method A CULs. None of the detected concentrations exceed MTCA Method A CULs or Federal MCLs for drinking water. Therefore, the detected concentrations of these COPCs do not pose a human health risk. However, the presence of these chemicals indicates that there ~~may be~~may have been a release of these compounds near or upgradient of the soil and groundwater sample locations.

Two USTs were removed from the NRDS property in 1994, and a release of fuel was reported to Ecology. Upon discovery of the petroleum-impacted soil, No additional records indicating that the release was mitigated were on file at Ecology. The location of the two USTs removed on the NRDS property was not described in the documents reviewed. If SPU has an independent cleanup was conducted, and petroleum-impacted soil on the NRDS property was removed to the extent practical to maintain the structural integrity of two retaining walls and a building located in the southeast corner of the property. Observations recorded during the cleanup activities described the visible impacted soil in the southern excavation sidewall as a "2 to 3 inch (gray-stained soil lens) 2 to 3 feet wide (Herrera 1997)." Consequently, petroleum-impacted soil was left undisturbed in the southeast corner of the property. ~~records regarding the removal of the USTs, the records should be reviewed, and the extent of the release should be evaluated.~~

In addition, the 15500 N~~North~~ 34th Street property has a restrictive covenant due to gasoline and diesel-impacted soil remaining below the building footprint. If future development plans include demolition of the building or disturbance of the impacted soil, Ecology is required to be notified, and the diesel-impacted soil will be required to be managed as petroleum contaminated soil ~~potentially hazardous waste~~.

On the basis of the results of this investigation, it is AMEC's opinion that the following actions be conducted onsite:

1. If the soil below the 15500 N~~North~~ 34th Street building will be disturbed, Ecology should be notified in accordance with the property's restrictive covenant, and a soil management plan should be prepared. The purpose of the plan is to address 1) worker safety monitoring and hazard prevention in the known contaminated areas onsite; 2) proposed plans to segregate, manage, and dispose of contaminated soil; and equipment decontamination.
2. If the NRDS is to be demolished, it is recommended that additional soil ~~and groundwater~~ samples be collected below building foundations in areas where floor drains are located. Gasoline constituents were detected in the Site groundwater in concentrations below MTCA CULs and State MCLs. The presence of the gasoline constituents in only one of

the three monitoring wells indicates that a localized source may be present within the main building. The presence of the gasoline constituents in the groundwater in the central area indicates that there is a release of gasoline onsite.

3. Should development plans include the demolition of the NRDS building located in the southeast corner of the 1350 North 34th Street property, the soil below the building and the electrical subsurface utility line connecting this building to the main building should be evaluated for the presence of petroleum, specifically gasoline and diesel. A lens of petroleum-impacted soil was reported in these areas in 1994 during the removal of two underground storage tanks. Where practical, the petroleum contaminated soil was removed. To maintain the structural integrity of two retaining walls and a building structure, the cleanup activities did not remove all of the petroleum contaminated soil onsite. Additional cleanup could be conducted in conjunction with Site redevelopment.
3. ~~Locate and review all documents pertaining to the former USTs on the NRDS property and evaluate the extent of the reported petroleum release associated with the USTs. Following this evaluation, the UST area may require additional environmental investigation and remediation to achieve closure from Ecology. This could be conducted in conjunction with Site redevelopment.~~
4. Collect groundwater from the three of the existing wells during the dry season to monitor the presence of VOCs, specifically the solvents and gasoline constituents in the groundwater. The purpose of the groundwater evaluation is to confirm that the VOCs, solvents, and gasoline constituents have remained at levels below Ecology MTCA Method A CUL cleanup levels.
5. Evaluate the extent of the elevated oil-range hydrocarbons detected along the northern property boundary.
6. Survey the elevations of the top of casing in the monitoring wells onsite. The groundwater gradient onsite may be calculated following completion of this survey.

8.0 CLOSURE

AMEC appreciates the opportunity to be of service to the SPU Materials Laboratory on this project. If you have any questions or comments regarding this report, please feel free to contact us at (425) 820-4669.

AMEC Earth & Environmental, Inc.

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CI/MJ/CF

9.08.0 LIMITATIONS

This report was prepared exclusively for the SPU Materials Laboratory by AMEC Earth & Environmental, Inc. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in AMEC services and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report and AMEC proposal. This report is intended to be used by the SPU Materials Laboratory for the Site only, subject to the terms and conditions of the Seattle Public Utility's contract with AMEC. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

The findings contained herein are relevant to the dates of the AMEC Site visit and should not be relied upon to represent conditions at later dates. Data presented herein are from discreet sampling points identified in our report, and can not be construed to represent conditions at unsampled locations.

10.09.0 REFERENCES

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TABLES

Table 1
Total Petroleum Hydrocarbons Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				TPH-Diesel Range	TPH-Lube Oil Range	TPH-Gasoline Range
				(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				2,000	2,000	30
MTCA Method A CULs for Industrial Land Use				---	---	---
MTCA Method B CULs, Carcinogen				---	---	---
MTCA Method B CULs, Non-carcinogen				---	---	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)			
B-1	3/10/2008	B-1_5	5	29.0 U	57.0 U	5.60 U
B-3	3/10/2008	B-3_3	3	150	300	6.50 U
B-4	3/11/2008	B-4_6	6	28.0 U	110	4.60 U
B-5 (DUP)	3/11/2008	B-5_6	7	140 U	2,700	6.00 U
B-5	3/11/2008	B-5_7	7	140 U	2,400	5.10 U

Notes:

BOLD = detection

All results have not been not validated

mg/Kg = milligrams per kilogram

bgs = below ground surface

U = The analyte is not detected at or above the concentration listed

--- = no data/not researched

DUP = Field Duplicate

MTCA Method A Cleanup Levels (CULs) from *Washington State Department of Ecology*,
Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

Table 2
Volatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				(cis) 1,2-Dichloroethene	(cis) 1,3-Dichloropropene	(trans) 1,2-Dichloroethene	(trans) 1,3-Dichloropropene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	2	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	2	---	---	---	---	---
MTCA Method B CULs, Carcinogen				---	5.6	---	5.6	38	---	5	18	---	1.7	---
MTCA Method B CULs, Non-carcinogen				800	2,400	1,600	2,400	2,400	72,000	---	320	8,000	4,000	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_5	5	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U
B-3	3/10/2008	B-3_3	3	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
B-4	3/11/2008	B-4_6	6	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
B-5 (DUP)	3/11/2008	B-5_6	7	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
B-5	3/11/2008	B-5_7	7	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

Notes:

BOLD = detection

All results have not been not validated

mg/Kg = milligrams per kilogram

bgs = below ground surface

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

U = The analyte is not detected at or
above the listed reporting detection limit

Table 2
Volatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs			---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land			---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	0.14	---	---	0.71	---	---	11	15	---	---
MTCA Method B CULs, Non-carcinogen			---	480	800	4,000	---	---	7,200	1,600	---	4,000	---
Location ID	Sample Date	Sample ID											
B-1	3/10/2008	B-1_5	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.005 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U
B-3	3/10/2008	B-3_3	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
B-4	3/11/2008	B-4_6	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.005 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
B-5 (DUP)	3/11/2008	B-5_6	0.001 U	0.001 U	0.001 U	0.001 U	0.006 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
B-5	3/11/2008	B-5_7	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

Notes:

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mg/Kg = milligrams per kilogram

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

U = The analyte is not detected at or
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Table 2
Volatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chloroethyl Vinyl Ether	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	Acetone	Benzene	Bromobenzene
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs			---	---	---	---	---	---	---	---	---	0.03	---
MTCA Method A CULs for Industrial Land			---	---	---	---	---	---	---	---	---	0.03	---
MTCA Method B CULs, Carcinogen			---	42	---	---	---	---	---	---	---	18	---
MTCA Method B CULs, Non-carcinogen			---	---	---	---	---	---	---	---	8,000	320	---
Location ID	Sample Date	Sample ID											
B-1	3/10/2008	B-1_5	0.0009 U	0.0009 U	0.0009 U	0.005 U	0.005 U	0.0009 U	0.005 U	0.0009 U	0.014	0.0009 U	0.0009 U
B-3	3/10/2008	B-3_3	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U
B-4	3/11/2008	B-4_6	0.0010 U	0.0010 U	0.0010 U	0.005 U	0.005 U	0.0010 U	0.005 U	0.0010 U	0.005 U	0.0010 U	0.0010 U
B-5 (DUP)	3/11/2008	B-5_6	0.001 U	0.001 U	0.001 U	0.006 U	0.006 U	0.001 U	0.006 U	0.001 U	0.730	0.001 U	0.001 U
B-5	3/11/2008	B-5_7	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.001 U	0.005 U	0.001 U	0.380	0.001 U	0.001 U

Notes:

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

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above the listed reporting detection limit

Table 2
Volatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs			---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land			---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	16	130	---	---	7.7	---	---	160	77	12
MTCA Method B CULs, Non-carcinogen			---	1,600	1,600	110	8,000	56	70,000	1,600	800	---	1,600
Location ID	Sample Date	Sample ID											
B-1	3/10/2008	B-1_5	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.005 U	0.0009 U	0.005 U	0.0009 U
B-3	3/10/2008	B-3_3	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U
B-4	3/11/2008	B-4_6	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.005 U	0.0010 U	0.005 U	0.0010 U
B-5 (DUP)	3/11/2008	B-5_6	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.006 U	0.001 U	0.006 U	0.001 U
B-5	3/11/2008	B-5_7	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U

Notes:

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All results have not been not validated

mg/Kg = milligrams per kilogram

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

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above the listed reporting detection limit

Table 2
Volatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Iodomethane	Isopropylbenzene	Methyl Isobutyl Ketone	Methyl t-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs			---	---	6	---	---	---	---	0.1	0.02	5	---
MTCA Method A CULs for Industrial Land			---	---	6	---	---	---	---	0.1	0.02	5	---
MTCA Method B CULs, Carcinogen			---	---	---	13	---	---	---	560	130	---	---
MTCA Method B CULs, Non-carcinogen			---	16,000	8,000	16	---	---	6,400	69,000	4,800	1,600	---
Location ID	Sample Date	Sample ID											
B-1	3/10/2008	B-1_5	0.0009 U	0.0009 U	0.0009 U	0.005 U	0.005 U	0.0009 U	0.005 U	0.0009 U	0.005 U	0.0009 U	0.0009 U
B-3	3/10/2008	B-3_3	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U
B-4	3/11/2008	B-4_6	0.0010 U	0.0010 U	0.0010 U	0.005 U	0.005 U	0.0010 U	0.005 U	0.0010 U	0.005 U	0.0010 U	0.0010 U
B-5 (DUP)	3/11/2008	B-5_6	0.001 U	0.001 U	0.001 U	0.006 U	0.006 U	0.001 U	0.006 U	0.001 U	0.006 U	0.001 U	0.001 U
B-5	3/11/2008	B-5_7	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U

Notes:

BOLD = detection

All results have not been not validated

mg/Kg = milligrams per kilogram

bgs = below ground surface

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

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above the listed reporting detection limit

Table 2
Volatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs			---	---	---	---	---	0.05	7	0.03	---	---	---
MTCA Method A CULs for Industrial Land			---	---	---	---	---	0.05	7	0.03	---	---	---
MTCA Method B CULs, Carcinogen			---	---	---	33	---	240	---	1.9	---	---	0.67
MTCA Method B CULs, Non-carcinogen			---	---	---	16,000	---	35,000	280,000	800	24,000	80,000	240
Location ID	Sample Date	Sample ID											
B-1	3/10/2008	B-1_5	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.002	0.0009 U	0.0009 U	0.005 U	0.0009 U
B-3	3/10/2008	B-3_3	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.003	0.001 U	0.001 U	0.005 U	0.001 U
B-4	3/11/2008	B-4_6	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.003	0.0010 U	0.0010 U	0.005 U	0.0010 U
B-5 (DUP)	3/11/2008	B-5_6	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005	0.002	0.001 U	0.001 U	0.006 U	0.001 U
B-5	3/11/2008	B-5_7	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001	0.003	0.001 U	0.001 U	0.005 U	0.001 U

Notes:

BOLD = detection

All results have not been not validated

mg/Kg = milligrams per kilogram

bgs = below ground surface

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

U = The analyte is not detected at or
above the listed reporting detection limit

Table 2
Volatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			m,p-Xylene	o-Xylene	Total-Xylene
			(mg/Kg)	(mg/Kg)	(mg/kg)
MTCA Method A CULs			---	---	9
MTCA Method A CULs for Industrial Land			---	---	9
MTCA Method B CULs, Carcinogen			---	---	---
MTCA Method B CULs, Non-carcinogen			160,000	160,000	16,000
Location ID	Sample Date	Sample ID			
B-1	3/10/2008	B-1_5	0.002 U	0.0009 U	0.002
B-3	3/10/2008	B-3_3	0.002 U	0.001 U	0.002
B-4	3/11/2008	B-4_6	0.002 U	0.0010 U	0.002
B-5 (DUP)	3/11/2008	B-5_6	0.002 U	0.001 U	0.002
B-5	3/11/2008	B-5_7	0.002 U	0.001 U	0.002

Notes:

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

U = The analyte is not detected at or
above the listed reporting detection limit

Table 3
Semivolatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				(3+4)-Methylphenol (m,p-Cresol)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dinitrobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,3-Dinitrobenzene	1,4-Dichlorobenzene	1,4-Dinitrobenzene	1-Methylnaphthalene	2,3,4,6-Tetrachlorophenol
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen				---	---	---	---	1.3	---	---	42	---	---	---
MTCA Method B CULs, Non-carcinogen				---	800	7,200	---	---	---	---	---	---	24	2,400
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_8	8	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.007 U	0.037 U
B-3	3/10/2008	B-3_3	3	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.008 U	0.041 U
B-4	3/11/2008	B-4_8	8	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.007 U	0.037 U
B-5 (DUP)	3/11/2008	B-5_8	9	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.007 U	0.035 U
B-5	3/11/2008	B-5_9	9	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.007 U	0.035 U

Notes:

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bgs = below ground surface

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology*,
Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 3
Semivolatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				2,3,5,6-Tetrachlorophenol	2,3-Dichloroaniline	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen				---	---	---	91	---	---	---	---	---	---	---
MTCA Method B CULs, Non-carcinogen				---	---	8,000	---	240	1,600	160	160	80	---	40
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_8	8	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.190 U	0.037 U	0.037 U	0.037 U	0.037 U
B-3	3/10/2008	B-3_3	3	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.210 U	0.041 U	0.041 U	0.041 U	0.041 U
B-4	3/11/2008	B-4_8	8	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.180 U	0.037 U	0.037 U	0.037 U	0.037 U
B-5 (DUP)	3/11/2008	B-5_8	9	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.170 U	0.035 U	0.035 U	0.035 U	0.035 U
B-5	3/11/2008	B-5_9	9	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.170 U	0.035 U	0.035 U	0.035 U	0.035 U

Notes:

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology*,
Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

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above the listed reporting detection limit

Table 3
Semivolatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				2-Methylnaphthalene	2-Methylphenol (o-Cresol)	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl-phenylether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenylether
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen				---	---	---	---	2.2	---	---	---	---	---	---
MTCA Method B CULs, Non-carcinogen				320	---	---	---	---	---	---	---	---	---	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_8	8	0.007 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.190 U	0.037 U	0.037 U	0.037 U	0.037 U
B-3	3/10/2008	B-3_3	3	0.008 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.210 U	0.041 U	0.041 U	0.041 U	0.041 U
B-4	3/11/2008	B-4_8	8	0.007 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.180 U	0.037 U	0.037 U	0.037 U	0.037 U
B-5 (DUP)	3/11/2008	B-5_8	9	0.007 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.170 U	0.035 U	0.035 U	0.035 U	0.035 U
B-5	3/11/2008	B-5_9	9	0.007 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.170 U	0.035 U	0.035 U	0.035 U	0.035 U

Notes:

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

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Table 3
Semivolatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo[g,h,i]perylene	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl)ether
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen				---	---	---	---	180	---	4,300	---	---	---	0.91
MTCA Method B CULs, Non-carcinogen				---	---	4,800	---	---	24,000	240	---	24,000	---	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_8	8	0.037 U	0.037 U	0.007 U	0.007 U	0.037 U	0.007 U	0.370 U	0.007 U	0.037 U	0.037 U	0.037 U
B-3	3/10/2008	B-3_3	3	0.041 U	0.041 U	0.008 U	0.008 U	0.041 U	0.008 U	0.410 U	0.008 U	0.041 U	0.041 U	0.041 U
B-4	3/11/2008	B-4_8	8	0.037 U	0.037 U	0.007 U	0.007 U	0.037 U	0.007 U	0.370 U	0.007 U	0.037 U	0.037 U	0.037 U
B-5 (DUP)	3/11/2008	B-5_8	9	0.035 U	0.035 U	0.007 U	0.007 U	0.035 U	0.007 U	0.350 U	0.007 U	0.035 U	0.035 U	0.035 U
B-5	3/11/2008	B-5_9	9	0.035 U	0.035 U	0.007 U	0.007 U	0.035 U	0.007 U	0.350 U	0.007 U	0.035 U	0.035 U	0.035 U

Notes:

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database* (April 17, 2008)

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above the listed reporting detection limit

Table 3
Semivolatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				bis(2-Chloroisopropyl)ether	bis(2-Ethylhexyl)phthalate	bis-2-Ethylhexyladipate	Butylbenzylphthalate	Carbazole	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen				---	71	---	---	50	---	---	---	---	---	---
MTCA Method B CULs, Non-carcinogen				3,200	1,600	---	16,000	---	160	64,000	8,000	8,000	1,600	3,200
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_8	8	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.041	0.037 U	0.007 U
B-3	3/10/2008	B-3_3	3	0.041 U	0.052	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.071	0.041 U	0.008 U
B-4	3/11/2008	B-4_8	8	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.007 U
B-5 (DUP)	3/11/2008	B-5_8	9	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.007 U
B-5	3/11/2008	B-5_9	9	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.037	0.035 U	0.007 U

Notes:

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mg/Kg = milligrams per kilogram

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Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

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Table 3
Semivolatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Isophorone	Naphthalene	Nitrobenzene	N-Nitrosodimethylamine	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	5	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	5	---	---	---	---
MTCA Method B CULs, Carcinogen				---	0.63	13	0.56	71	1,100	---	---	0.02	0.14	---
MTCA Method B CULs, Non-carcinogen				3,200	64	16	---	80	16,000	1,600	40	---	---	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_8	8	0.007 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.007 U	0.037 U	0.037 U	0.037 U	0.037 U
B-3	3/10/2008	B-3_3	3	0.008 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.008 U	0.041 U	0.041 U	0.041 U	0.041 U
B-4	3/11/2008	B-4_8	8	0.007 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.007 U	0.037 U	0.037 U	0.037 U	0.037 U
B-5 (DUP)	3/11/2008	B-5_8	9	0.007 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.007 U	0.035 U	0.035 U	0.035 U	0.035 U
B-5	3/11/2008	B-5_9	9	0.007 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.007 U	0.035 U	0.035 U	0.035 U	0.035 U

Notes:

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MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology*,
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above the listed reporting detection limit

Table 3
Semivolatile Organic Compound Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Indeno[1,2,3-cd]pyrene	Total TEF
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	0.1	---	---	---	---	---	0.1
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	2	---	---	---	---	---	2
MTCA Method B CULs, Carcinogen				83	---	---	---	---	---	0.14	---	---	---	---	---	---
MTCA Method B CULs, Non-carcinogen				2400	---	48,000	2,400	80	---	---	---	---	---	---	---	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)													
B-1	3/10/2008	B-1_8	8	0.190 U	0.007 U	0.037 U	0.007 U	0.037 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.005
B-3	3/10/2008	B-3_3	3	0.210 U	0.013	0.041 U	0.011	0.041 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.006
B-4	3/11/2008	B-4_8	8	0.180 U	0.007 U	0.037 U	0.007 U	0.037 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.005
B-5 (DUP)	3/11/2008	B-5_8	9	0.170 U	0.007 U	0.035 U	0.007 U	0.035 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.005
B-5	3/11/2008	B-5_9	9	0.170 U	0.007 U	0.035 U	0.007 U	0.035 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.005

Notes:

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above the listed reporting detection limit

TEF = Toxicity Equivalency Factor, calculated in accordance
with WAC 173-340-708(e)

Table 4
Metal Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				Arsenic	Barium	Cadmium	Total Chromium	Soluble Hexavalent Chromium	Lead	Mercury	Selenium	Silver
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				20	---	2	2,000*	19	250	2	---	---
MTCA Method A CULs for Industrial Land Use				20	---	2	2,000	19	250	2	---	---
MTCA Method B CULs, Carcinogen				0.67	---	---	---	---	---	---	---	---
MTCA Method B CULs, Non-carcinogen				24	16,000	80	120,000*	---	24	24	400	400
Location ID	Sample Date	Sample ID	Depth (feet bgs)									
B-1	3/10/2008	B-1_3	3	11.0 U	46.0	0.570 U	32.0	1.10 U	5.70 U	0.280 U	11.0 U	0.570 U
B-3	3/10/2008	B-3_6	6	11.0 U	46.0	0.560 U	22.0	1.10 U	5.60 U	0.280 U	11.0 U	0.560 U
B-4	3/11/2008	B-4_8	8	11.0 U	33.0	0.550 U	18.0	1.10 U	5.50 U	0.270 U	11.0 U	0.550 U
B-5 (DUP)	3/11/2008	B-5_11	12	11.0 U	34.0	0.570 U	26.0	1.10 U	5.70 U	0.290 U	11.0 U	0.570 U
B-5	3/11/2008	B-5_12	12	11.0 U	39.0	0.570 U	30.0	1.10 U	5.70 U	0.280 U	11.0 U	0.570 U

Notes:

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*=Trivalent chromium CUL

Table 5
Pesticide Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	3	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	4	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen				4	2.9	2.9	0.059	---	---	---	---	0.063	---	---
MTCA Method B CULs, Non-carcinogen				---	---	40	2	---	---	---	---	4	---	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_3	3	0.011 U	0.011 U	0.011 U	0.0057 U	0.0057 U	0.011 U	0.0057 U	0.0057 U	0.011 U	0.0057 U	0.011 U
B-3	3/10/2008	B-3_6	6	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.01 U	0.005 U	0.005 U	0.01 U	0.005 U	0.01 U
B-4	3/11/2008	B-4_3	3	0.011 U	0.011 U	0.011 U	0.0056 U	0.0056 U	0.011 U	0.0056 U	0.0056 U	0.011 U	0.0056 U	0.011 U
B-5	3/11/2008	B-5_3	3	0.011 U	0.011 U	0.011 U	0.0054 U	0.0054 U	0.011 U	0.0054 U	0.0054 U	0.011 U	0.0054 U	0.011 U

Notes:

BOLD = detection

All results have not been not validated

mg/Kg = milligrams per kilogram

bgs = below ground surface

--- = no data/not researched

MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database* (April 17, 2008)

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Table 5
Pesticide Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Endrin	Endrin Aldehyde	Endrin Ketone	Endsulfan Sulfate	gamma-BHC	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs			---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial La			---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	---	---	---	---	---	0.22	0.11	---	---
MTCA Method B CULs, Non-carcinoge			24	---	---	---	---	---	40	1	400	---
Location ID	Sample Date	Sample ID										
B-1	3/10/2008	B-1_3	0.011 U	0.011 U	0.011 U	0.011 U	0.0057 U	0.011 U	0.0057 U	0.0057 U	0.011 U	0.0057 U
B-3	3/10/2008	B-3_6	0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.01 U	0.005 U	0.005 U	0.01 U	0.005 U
B-4	3/11/2008	B-4_3	0.011 U	0.011 U	0.011 U	0.011 U	0.0056 U	0.011 U	0.0056 U	0.0056 U	0.011 U	0.0056 U
B-5	3/11/2008	B-5_3	0.011 U	0.011 U	0.011 U	0.011 U	0.0054 U	0.011 U	0.0054 U	0.0054 U	0.011 U	0.0054 U

Notes:

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All results have not been not validated

mg/kg = milligrams per kilogram

bgs = below ground surface

--- = no data/not researched

MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database* (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 6
Herbicide Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				2,4,5-T	2,4,5-TP (Silvex)	2,4-D	2,4-DB	Dalapon	Dicamba	Dichlorprop	Dinoseb	MCPA	MCPP	Pentachlorophenol
				(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
MTCA Method A CULs				---	---	---	---	---	---	---	---	---	---	---
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen				---	---	---	---	---	---	---	---	---	---	8
MTCA Method B CULs, Non-carcinogen				800	650	800	640	24,000	24,000	---	80	---	---	24,000
Location ID	Sample Date	Sample ID	Depth (feet bgs)											
B-1	3/10/2008	B-1_3	3	0.054 U	0.054 U	0.053 U	0.054 U	0.26 U	0.053 U	0.054 U	0.054 U	5.3 U	5.3 U	0.0011 U
B-3	3/10/2008	B-3_6	6	0.053 U	0.053 U	0.052 U	0.053 U	0.25 U	0.052 U	0.052 U	0.053 U	5.2 U	5.2 U	0.0011 U
B-4	3/11/2008	B-4_3	3	0.053 U	0.053 U	0.053 U	0.053 U	0.26 U	0.053 U	0.053 U	0.053 U	5.3 U	5.3 U	0.0011 U
B-5	3/11/2008	B-5_3	3	0.051 U	0.051 U	0.051 U	0.051 U	0.25 U	0.051 U	0.051 U	0.051 U	5 U	5 U	0.001 U

Notes:

BOLD = detection

All results have not been not validated

mg/Kg = milligrams per kilogram

bgs = below ground surface

--- = no data/not researched

MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)*

U = The analyte is not detected at or
above the listed reporting detection limit

Table 7
Polychlorinated Biphenyl Soil Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total Aroclors
				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
MTCA Method A CULs				---	---	---	---	---	---	---	---	---	1
MTCA Method A CULs for Industrial Land Use				---	---	---	---	---	---	---	---	---	10
MTCA Method B CULs, Carcinogen				---	---	---	---	---	---	---	---	---	0.5
MTCA Method B CULs, Noncarcinogen				---	---	---	---	---	---	---	---	---	---
Location ID	Sample Date	Sample ID	Depth (feet bgs)										
B-1	3/10/2008	B-1_3	3	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	ND
B-3	3/10/2008	B-3_6	6	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	ND
B-4	3/11/2008	B-4_3	3	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	ND
B-5	3/11/2008	B-5_3	3	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	ND

Notes:

BOLD = detection

All results have not been not validated

mg/Kg = milligrams per kilogram

bgs = below ground surface

--- = no data/not researched

MTCA Method A and B Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database* (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 8
Total Petroleum Hydrocarbon Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			TPH-Diesel Range	TPH- Lube Oil Range	TPH-Gasoline Range
			(mg/L)	(mg/L)	(µg/L)
MTCA Method A CUL			0.5	0.5	800
Groundwater ARAR- Federal MCL			---	---	---
MTCA Method B CULs, Carcinogen			---	---	---
MTCA Method B CULs, Noncarcinogen			---	---	---
Location ID	Sample Date	Sample ID			
MW1	3/14/2008	DUP-1	0.280 U	0.450 U	100 U
MW1	3/14/2008	MW-1	0.270 U	0.430 U	100 U
MW2	3/14/2008	MW-2	0.260 U	0.420 U	100 U
MW3	3/14/2008	MW-3	0.270 U	0.430 U	100 U

Notes:

All results have not been not validated

TPH = total petroleum hydrocarbons

mg/L = milligrams per liter

µg/L = micrograms per liter

BOLD = detection

U = The analyte is not detected at or above the concentration listed

DUP = Field Duplicate

--- = no data/not researched

MTCA Method A Cleanup Levels (CULs) from *Washington State Department of Ecology, Cleanup Levels and Risk Calculations* (CLARC) database (April 17, 2008)

Table 9
Volatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			(cis) 1,2-Dichloroethene	(cis) 1,3-Dichloropropene	(trans) 1,2-Dichloroethene	(trans) 1,3-Dichloropropene	1,1,1,2-Tetrachloroethane	1,1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	200	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	---	---	---	---	200	---	5	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	0.24	---	0.24	1.7	---	0.22	0.77	---	0.073	---	---	0.0063	---
MTCA Method B CULs, Noncarcinogen			80	240	160	240	240	7,200	---	32	800	400	---	---	48	80
Location ID	Sample Date	Sample ID														
MW1	3/14/2008	DUP-1	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
MW1	3/14/2008	MW-1	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
MW2	3/14/2008	MW-2	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	30.0	0.200 U	0.200 U	30.0	31.0	0.200 U	0.200 U	0.200 U	0.200 U
MW3	3/14/2008	MW-3	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 9
Volatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chloroethyl Vinyl Ether	2-Chlorotoluene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	5	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	0.4	---	600	5	5	---	---	---	75	---	---	---	---
MTCA Method B CULs, Carcinogen			---	0.031	---	---	0.48	0.64	---	---	---	1.8	---	---	---	---
MTCA Method B CULs, Noncarcinogen			400	---	---	720	160	---	400	---	---	---	---	---	---	---
Location ID	Sample Date	Sample ID														
MW1	3/14/2008	DUP-1	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	5.00 U	1.00 U	0.200 U
MW1	3/14/2008	MW-1	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	5.00 U	1.00 U	0.200 U
MW2	3/14/2008	MW-2	0.200 U	1.00 U	0.200 U	0.200 U	3.40	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	5.00 U	1.00 U	0.200 U
MW3	3/14/2008	MW-3	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	5.00 U	1.00 U	0.200 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 9
Volatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			2-Hexanone	4-Chlorotoluene	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	5	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	---	---	5	---	80	---	80	---	---	5	100	---	80
MTCA Method B CULs, Carcinogen			---	---	---	0.8	---	---	0.71	5.5	---	---	0.34	---	---	7.2
MTCA Method B CULs, Noncarcinogen			---	---	800	32	---	---	160	160	11	800	5.6	160	---	80
Location ID	Sample Date	Sample ID														
MW1	3/14/2008	DUP-1	2.00 U	0.200 U	5.00 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U
MW1	3/14/2008	MW-1	2.00 U	0.200 U	5.00 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U
MW2	3/14/2008	MW-2	2.00 U	0.200 U	5.00 U	0.320	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.660
MW3	3/14/2008	MW-3	2.00 U	0.200 U	5.00 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U

Notes:

BOLD = detection

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µg/L = micrograms per liter

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MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
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Table 9
Volatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Chloromethane	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Iodomethane	Isopropylbenzene	Methyl Isobutyl Ketone	Methyl t-Butyl Ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	700	---	---	---	---	20	5	160	---	---
Groundwater ARAR- Federal MCL			---	80	---	---	700	---	---	---	---	---	5	---	---	---
MTCA Method B CULs, Carcinogen			3.4	0.52	---	---	---	0.56	---	---	---	24	5.8	---	---	---
MTCA Method B CULs, Noncarcinogen			---	160	---	1,600	800	1.6	---	---	640	6,900	480	160	---	---
Location ID	Sample Date	Sample ID														
MW1	3/14/2008	DUP-1	1.00 U	0.310	0.200 U	0.200 U	0.280	0.200 U	1.00 U	0.200 U	2.00 U	0.200 U	1.00 U	1.00 U	0.200 U	0.200 U
MW1	3/14/2008	MW-1	1.00 U	0.320	0.200 U	0.200 U	0.300	0.200 U	1.00 U	0.200 U	2.00 U	0.200 U	1.00 U	1.00 U	0.200 U	0.200 U
MW2	3/14/2008	MW-2	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	2.00 U	0.200 U	1.00 U	1.00 U	0.200 U	0.200 U
MW3	3/14/2008	MW-3	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	2.00 U	0.200 U	1.00 U	1.00 U	0.200 U	0.200 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

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MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

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above the listed reporting detection limit

Table 9
Volatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride	m,p-Xylene	o-Xylene	Total Xylenes
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	5	1,000	5	---	---	0.2	---	---	1000
Groundwater ARAR- Federal MCL			---	---	100	---	5	1,000	5	---	---	2	---	---	10
MTCA Method B CULs, Carcinogen			---	---	1.5	---	0.081	---	0.11	---	---	0.029	---	---	---
MTCA Method B CULs, Noncarcinogen			---	---	1,600	---	80	640	2.4	2,400	8,000	24	16,000	16,000	1,600
Location ID	Sample Date	Sample ID													
MW1	3/14/2008	DUP-1	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.750	0.290	1.04
MW1	3/14/2008	MW-1	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.750	0.300	1.05
MW2	3/14/2008	MW-2	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.400 U	0.200 U	0.400
MW3	3/14/2008	MW-3	0.200 U	0.200 U	0.200 U	0.200 U	0.810	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U	0.400 U	0.200 U	0.400

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 10
Semivolatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			(3+4)-Methylphenol (m,p-Cresol)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dinitrobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,3-Dinitrobenzene	1,4-Dichlorobenzene	1,4-Dinitrobenzene	1-Methylnaphthalene	2,3,4,6-Tetrachlorophenol
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	70	600	---	---	---	---	---	75	---	---
MTCA Method B CULs, Carcinogen			---	---	---	---	0.11	---	---	1.4	---	---	---
MTCA Method B CULs, Noncarcinogen			400	80	720	---	---	---	---	---	---	2.4	480
Location ID	Sample Date	Sample ID											
MW1	3/14/2008	DUP-1	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	0.110 U	1.10 U
MW1	3/14/2008	MW-1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.100 U	1.00 U
MW2	3/14/2008	MW-2	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.098 U	0.980 U
MW3	3/14/2008	MW-3	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	0.110 U	1.10 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 10
Semivolatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			2,3,5,6-Tetrachlorophenol	2,3-Dichloroaniline	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	---	---	4	---	---	---	---	---	---	---
MTCA Method B CULs, Noncarcinogen			---	---	800	---	24	160	0.32	32	16	---	40
Location ID	Sample Date	Sample ID											
MW1	3/14/2008	DUP-1	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	5.40 U	1.10 U	1.10 U	1.10 U	1.10 U
MW1	3/14/2008	MW-1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.20 U	1.00 U	1.00 U	1.00 U	1.00 U
MW2	3/14/2008	MW-2	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	4.90 U	0.980 U	0.980 U	0.980 U	0.980 U
MW3	3/14/2008	MW-3	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	5.40 U	1.10 U	1.10 U	1.10 U	1.10 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 10
Semivolatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			2-Methylnaphthalene	2-Methylphenol (o-Cresol)	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl-phenylether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenylether
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	---	---	---	0.19	---	---	---	---	---	---
MTCA Method B CULs, Noncarcinogen			32	400	---	---	---	---	---	---	---	---	---
Location ID	Sample Date	Sample ID											
MW1	3/14/2008	DUP-1	0.110 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	5.40 U	1.10 U	1.10 U	1.10 U	1.10 U
MW1	3/14/2008	MW-1	0.100 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.20 U	1.00 U	1.00 U	1.00 U	1.00 U
MW2	3/14/2008	MW-2	0.098 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	4.90 U	0.980 U	0.980 U	0.980 U	0.980 U
MW3	3/14/2008	MW-3	0.110 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	5.40 U	1.10 U	1.10 U	1.10 U	1.10 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from

Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 10
Semivolatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo[g,h,i]perylene	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl)ether
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	---	---	---	7.7	---	0.00038	---	---	---	0.04
MTCA Method B CULs, Noncarcinogen			---	---	960	---	---	4,800	48	---	2,400	---	---
Location ID	Sample Date	Sample ID											
MW1	3/14/2008	DUP-1	1.10 U	1.10 U	0.110 U	0.110 U	1.10 U	0.110 U	11.0 U	0.011 U	1.10 U	1.10 U	1.10 U
MW1	3/14/2008	MW-1	1.00 U	1.00 U	0.100 U	0.100 U	1.00 U	0.100 U	10.0 U	0.010 U	1.00 U	1.00 U	1.00 U
MW2	3/14/2008	MW-2	0.980 U	0.980 U	0.098 U	0.098 U	0.980 U	0.098 U	9.80 U	0.010 U	0.980 U	0.980 U	0.980 U
MW3	3/14/2008	MW-3	1.10 U	1.10 U	0.110 U	0.110 U	1.10 U	0.110 U	11.0 U	0.011 U	1.10 U	1.10 U	1.10 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from

Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 10
Semivolatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			bis(2-Chloroisopropyl)ether	bis(2-Ethylhexyl)phthalate	bis-2-Ethylhexyladipate	Butylbenzylphthalate	Carbazole	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	6	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	6.3	---	---	4.4	---	---	---	---	---	---
MTCA Method B CULs, Noncarcinogen			320	320	---	3,200	---	0.32	13,000	16,000	---	320	640
Location ID	Sample Date	Sample ID											
MW1	3/14/2008	DUP-1	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	2.30	1.10 U	0.110 U
MW1	3/14/2008	MW-1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.20	1.00 U	0.100 U
MW2	3/14/2008	MW-2	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.098 U
MW3	3/14/2008	MW-3	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	0.110 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 10
Semivolatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Isophorone	Naphthalene	Nitrobenzene	N-Nitrosodimethylamine	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	1	---	50	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	0.055	0.56	---	3.1	0.46	---	---	0.00086	---	---
MTCA Method B CULs, Noncarcinogen			640	13	1.6	48	8	1,600	160	4	---	---	---
Location ID	Sample Date	Sample ID											
MW1	3/14/2008	DUP-1	0.110 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	0.110 U	1.10 U	1.10 U	1.10 U	1.10 U
MW1	3/14/2008	MW-1	0.100 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.100 U	1.00 U	1.00 U	1.00 U	1.00 U
MW2	3/14/2008	MW-2	0.098 U	0.980 U	0.980 U	0.980 U	0.980 U	0.980 U	0.098 U	0.980 U	0.980 U	0.980 U	0.980 U
MW3	3/14/2008	MW-3	0.110 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	0.110 U	1.10 U	1.10 U	1.10 U	1.10 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

U = The analyte is not detected at or
above the listed reporting detection limit

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

Table 10
Semivolatile Organic Compound Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Indeno[1,2,3-cd]pyrene	Total TEF
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	0.1	---	---	---	---	---	0.1
Groundwater ARAR- Federal MCL			1	---	---	---	---	---	0.2	---	---	---	---	---	0.2
MTCA Method B CULs, Carcinogen			0.73	---	---	---	---	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012
MTCA Method B CULs, Noncarcinogen			480	---	4,800	480	8	---	---	---	---	---	---	---	---
Location ID	Sample Date	Sample ID													
MW1	3/14/2008	DUP-1	5.40 U	0.110 U	1.10 U	0.110 U	1.10 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.006
MW1	3/14/2008	MW-1	5.20 U	0.100 U	1.00 U	0.100 U	1.00 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.008
MW2	3/14/2008	MW-2	4.90 U	0.098 U	0.980 U	0.170	0.980 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.008
MW3	3/14/2008	MW-3	5.40 U	0.110 U	1.10 U	0.110 U	1.10 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.006

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from

Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

TEF = Toxicity Equivalency Factor calculated in accordance with WAC 173-340-708(e)

U = The analyte is not detected at or

above the listed reporting detection limit

Table 11
Dissolved Metal Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			5	---	5	50	15	2	50	---
Groundwater ARAR- Federal MCL			20	2,000	5	100	15	2	50	---
MTCA Method B CULs, Carcinogen			0.058	---	---	---	---	---	---	---
MTCA Method B CULs, Noncarcinogen			4.8	3,200	8	---	---	4.8	80	80
Location ID	Sample Date	Sample ID								
MW1	3/14/2008	DUP-1	3.00 U	31.0	4.00 U	10.0 U	1.00 U	0.500 U	5.00 U	10.0 U
MW1	3/14/2008	MW-1	3.00 U	33.0	4.00 U	10.0 U	1.00 U	0.500 U	5.00 U	10.0 U
MW2	3/14/2008	MW-2	3.00 U	25.0 U	4.00 U	10.0 U	1.00 U	0.500 U	5.00 U	10.0 U
MW3	3/14/2008	MW-3	3.00 U	36.0	4.00 U	10.0 U	1.00 U	0.500 U	5.00 U	10.0 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

U = The analyte is not detected at or
above the listed reporting detection limit

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

Table 12
Pesticide Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endrin	Endrin Aldehyde	Endrin Ketone	Endsulfan Sulfate	gamma-BHC	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	0.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	0.4	0.2	40	---
MTCA Method B CULs, Carcinogen			0.36	0.26	0.26	0.0026	---	---	---	---	0.0055	---	---	---	---	---	---	---	---	0.019	0.0048	---	0.08
MTCA Method B CULs, Noncarcinogen			---	---	8	0.24	---	---	---	---	0.8	96	---	4.8	---	---	---	---	---	8	0.1	80	---
Location ID	Sample Date	Sample ID																					
MW1	3/14/2008	DUP-1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.019 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.010 U	0.048 U
MW1	3/14/2008	MW-1	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.023 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.056 U
MW2	3/14/2008	MW-2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.020 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.010 U	0.050 U
MW3	3/14/2008	MW-3	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.020 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.010 U	0.051 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from

Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 13
Herbicide Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			2,4,5-T	2,4,5-TP (Silvex)	2,4-D	2,4-DB	Dalapon	Dicamba	Dichlorprop	Dinoseb	MCPA	MCPP	Pentachlorophenol
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	---	---
Groundwater ARAR- Federal MCL			---	---	---	---	---	---	---	---	---	---	---
MTCA Method B CULs, Carcinogen			---	---	---	---	---	---	---	---	---	---	0.73
MTCA Method B CULs, Noncarcinogen			---	---	160	130	240	480	---	---	16	---	480
Location ID	Sample Date	Sample ID											
MW1	3/14/2008	DUP-1	0.024 U	0.024 U	0.470 U	0.024 U	0.230 U	0.024 U	0.024 U	0.024 U	4.70 U	4.70 U	0.010 U
MW1	3/14/2008	MW-1	0.023 U	0.023 U	0.460 U	0.023 U	0.230 U	0.023 U	0.023 U	0.023 U	4.60 U	4.60 U	0.009 U
MW2	3/14/2008	MW-2	0.023 U	0.023 U	0.460 U	0.023 U	0.220 U	0.023 U	0.023 U	0.023 U	4.60 U	4.60 U	0.009 U
MW3	3/14/2008	MW-3	0.023 U	0.023 U	0.450 U	0.023 U	0.220 U	0.023 U	0.023 U	0.023 U	4.50 U	4.50 U	0.009 U

Notes:

BOLD = detection

All results have not been not validated

µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

U = The analyte is not detected at or
above the listed reporting detection limit

Table 14
Polychlorinated Biphenyl Groundwater Analytical Results
SPU- North Recycling and Disposal Station
Seattle, Washington

			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total Aroclors
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MTCA Method A CUL			---	---	---	---	---	---	---	---	---	0.10
Groundwater ARAR- Federal MCL			---	---	---	---	---	---	---	---	---	0.50
MTCA Method B CULs, Carcinogen			---	---	---	---	---	---	---	---	---	0.044
MTCA Method B CULs, Noncarcinogen			---	---	---	---	---	---	---	---	---	---
Location ID	Sample Date	Sample ID										
MW1	3/14/2008	DUP-1	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	ND
MW1	3/14/2008	MW-1	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	ND
MW2	3/14/2008	MW-2	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	ND
MW3	3/14/2008	MW-3	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	ND

Notes:

BOLD = detection

ND = Not detected above laboratory detection limits

U = The analyte is not detected at or
above the listed reporting detection limit

All results have not been not validated

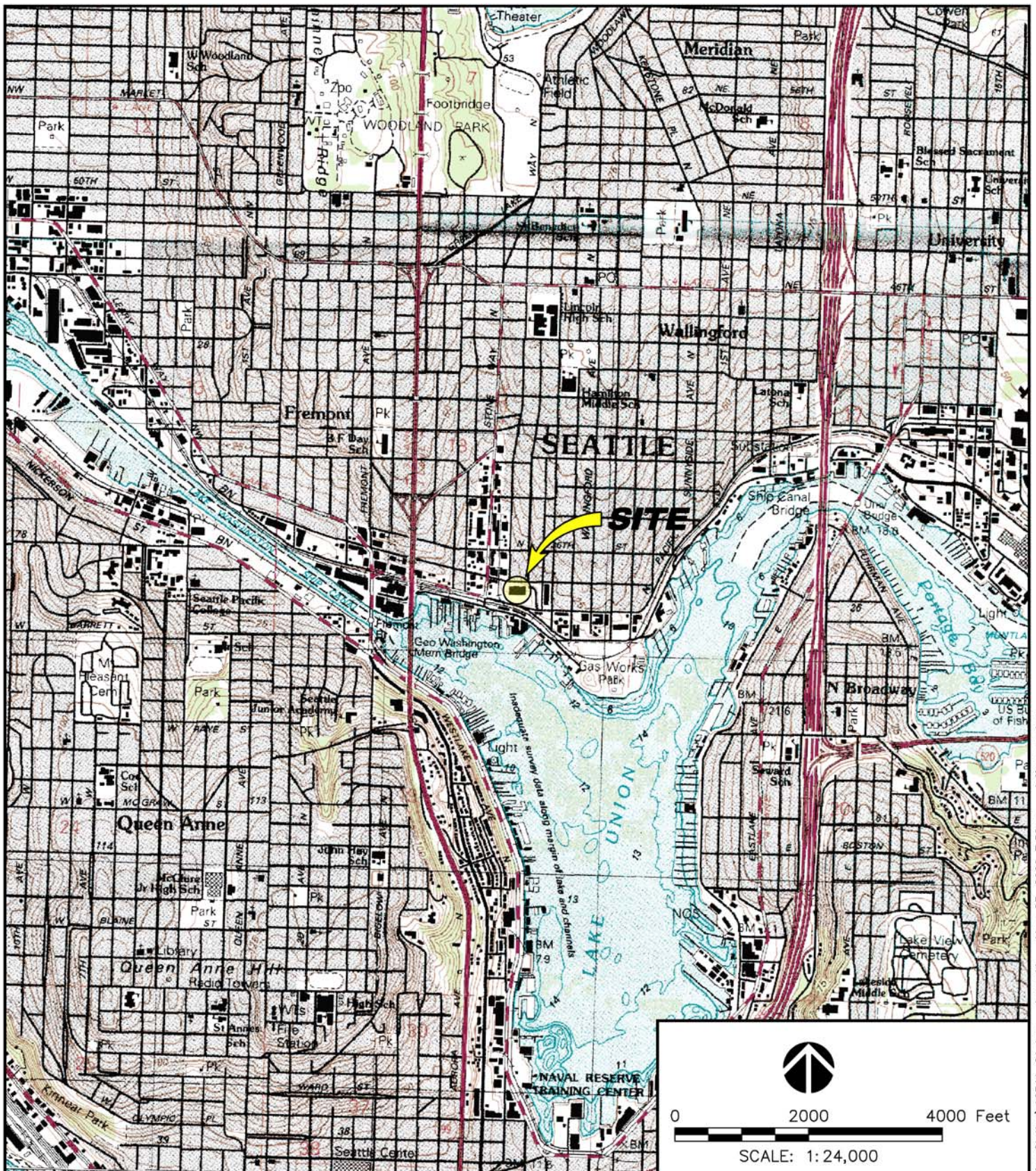
µg/L = micrograms per liter

--- = no data/not researched

DUP = Field duplicate

MTCA Method A and B Cleanup Levels (CULs) and Federal Primary Maximum Contaminant Level (MCL) from
Washington State Department of Ecology, Cleanup Levels and Risk Calculations (CLARC) database (April 17, 2008)

FIGURES



AMEC Earth & Environmental

11810 North Creek Parkway North
Bothell, WA, U.S.A. 98011-8201



CLIENT LOGO



CLIENT

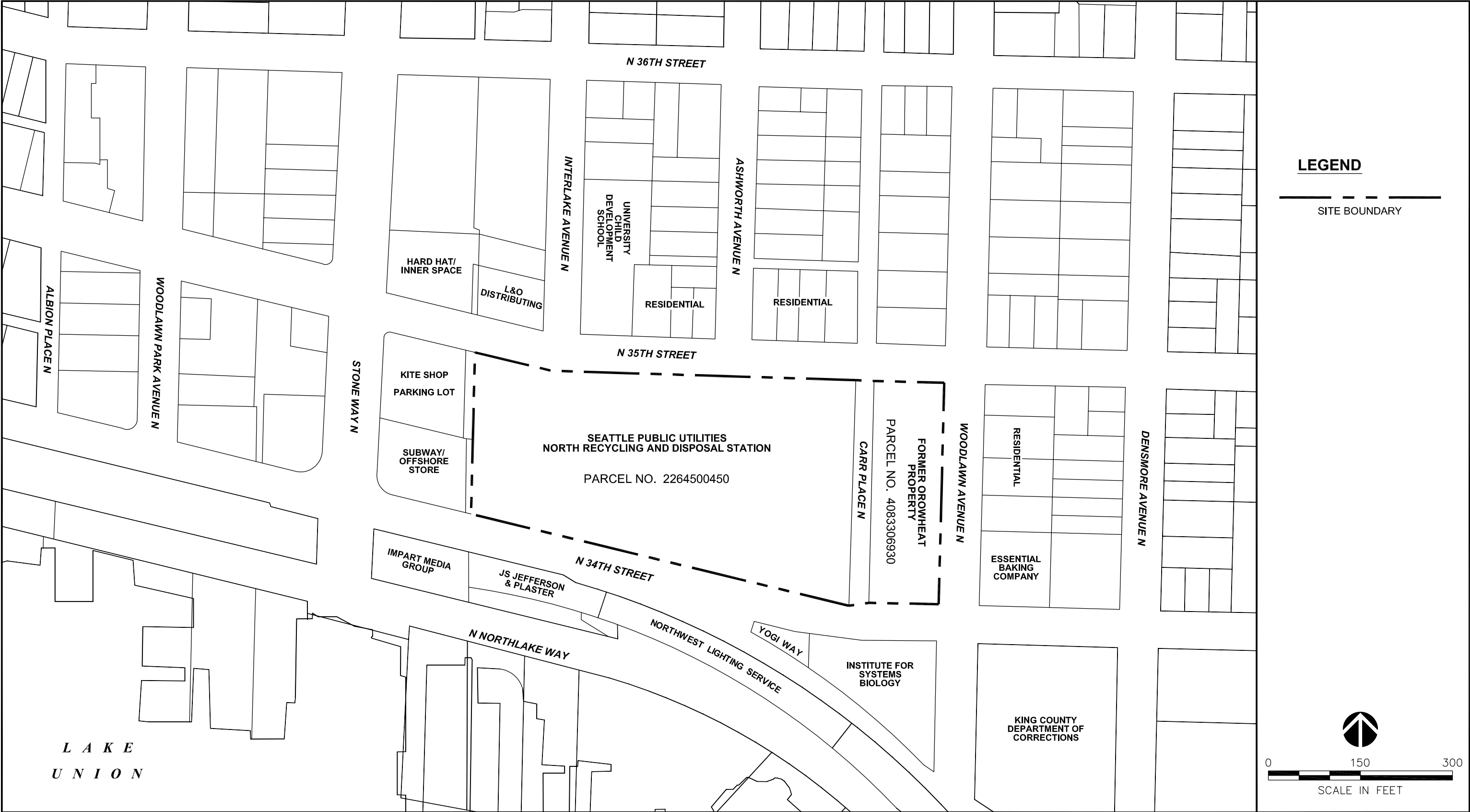
SEATTLE PUBLIC UTILITIES


PROJECT NORTH RECYCLING AND DISPOSAL STATION

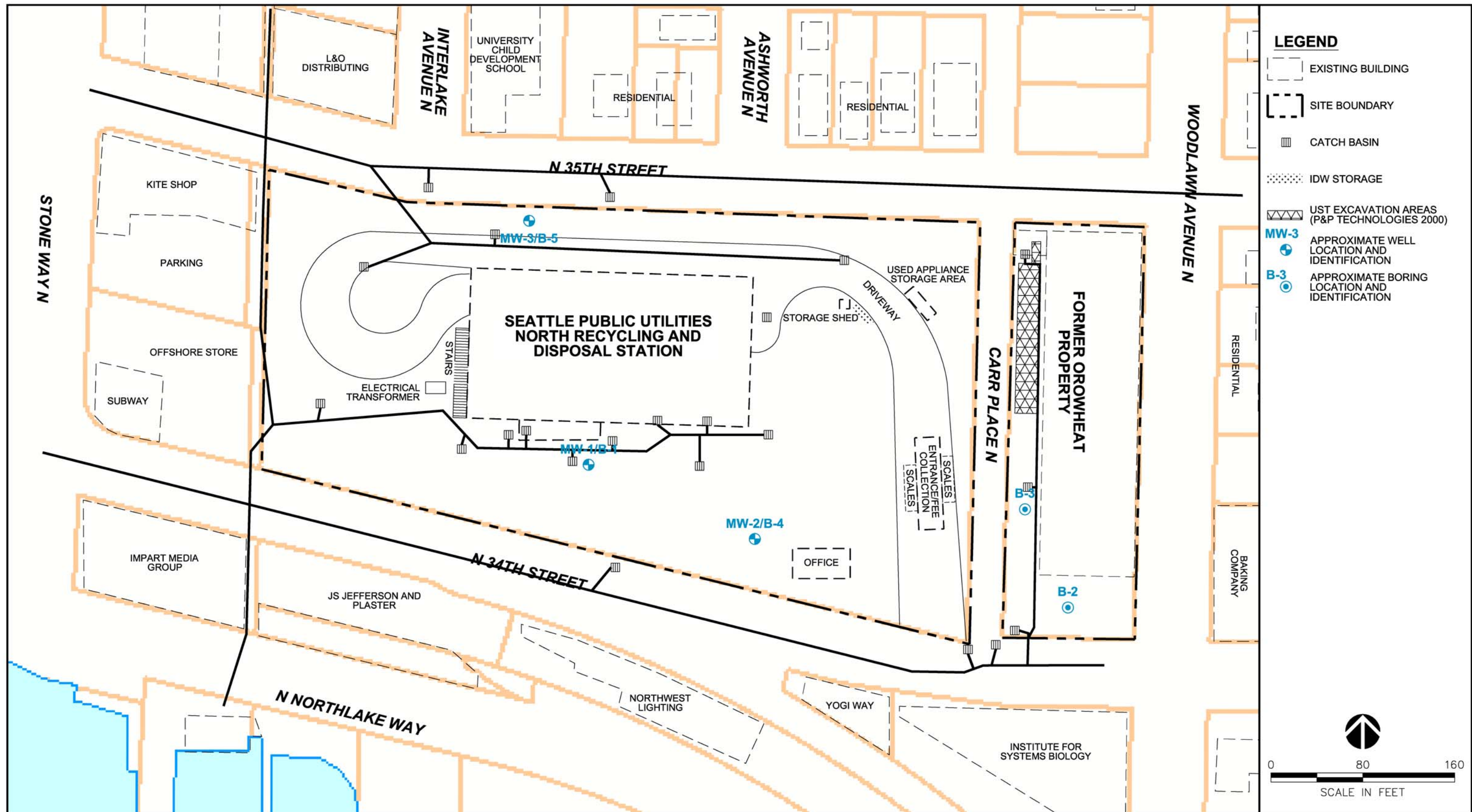
DWN BY: JRS DATUM: NAD83 DATE: MARCH 2009

TITLE
LOCATION MAP

CHK'D BY: CI REV. NO.: PROJECT NO: 8-915-16341-0
PROJECTION: WA STATE PLANE SCALE: AS SHOWN FIGURE No.



REFERENCE: MAP DRAWN FROM IMAGE OBTAINED FROM KING COUNTY IMAP WEBSITE.	<div>CLIENT LOGO</div> 	CLIENT: SEATTLE PUBLIC UTILITIES		DWN BY: JRS	PROJECT NORTH RECYCLING AND DISPOSAL STATION Seattle, WA	DATE: MARCH 2009	
				CHK'D BY: HV		PROJECT NO: 8-915-16341-0	
		AMEC Earth & Environmental 11810 North Creek Parkway North Bothell, WA, U.S.A. 98011-8201		DATUM: NONE		TITLE SITE VICINITY MAP	REV. NO.:
				PROJECTION: NONE			FIGURE No. 2
				SCALE: AS SHOWN			



REFERENCE: IMAGE OBTAINED FROM KING COUNTY IMAP WEBSITE. AERIAL DATED 2005.

CLIENT LOGO



CLIENT:

SEATTLE PUBLIC UTILITIES

AMEC Earth & Environmental

11810 North Creek Parkway North
Bothell, WA, U.S.A. 98011-8201



DWN BY:

JRS

CHK'D BY:

CI

DATUM:

NONE

PROJECTION:

NONE

SCALE:

AS SHOWN

PROJECT

NORTH RECYCLING AND DISPOSAL STATION

Seattle, WA

TITLE

SITE FEATURES

DATE:

MARCH 2009

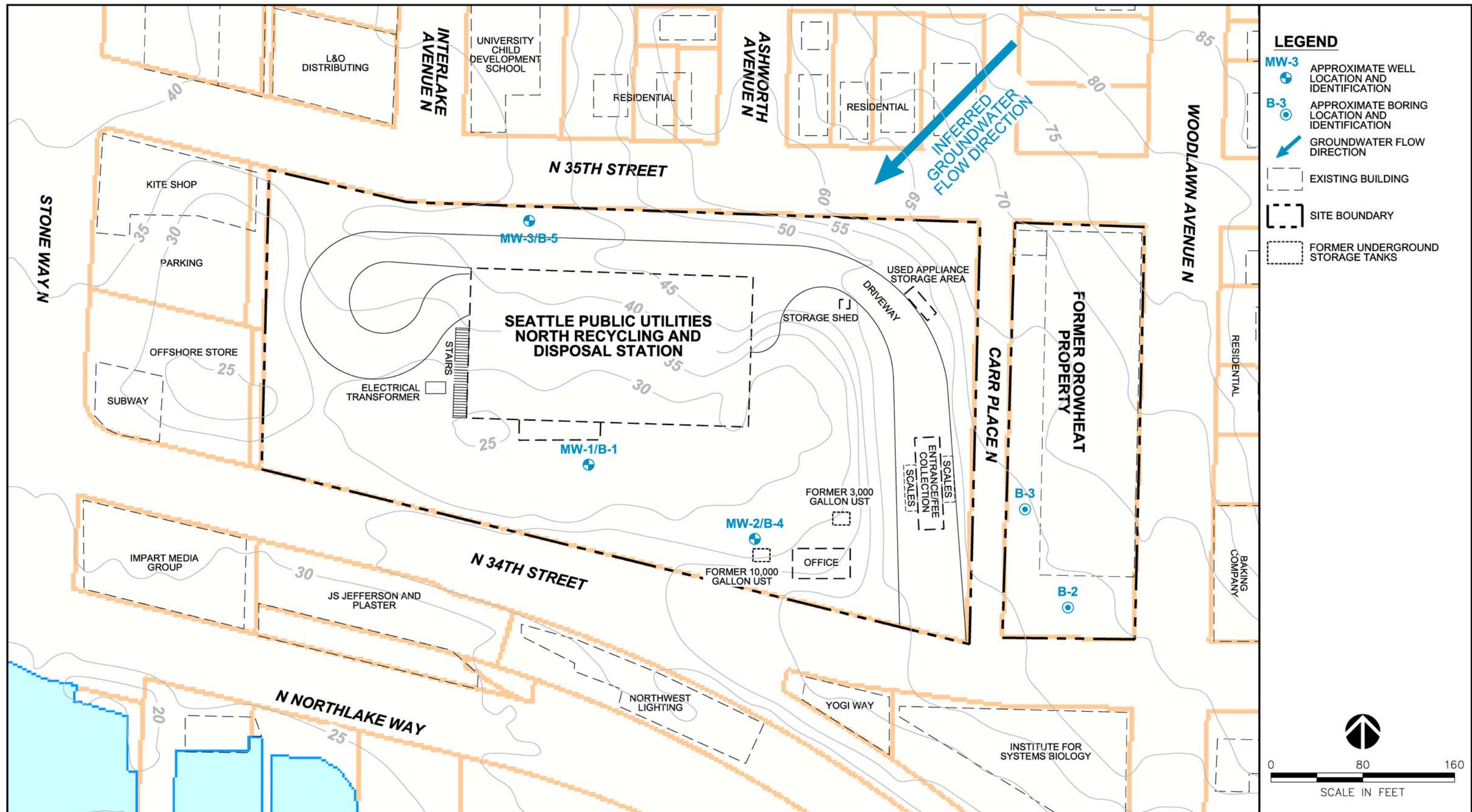
PROJECT NO.:

8-915-16341-0

REV. NO.:

FIGURE No.

3



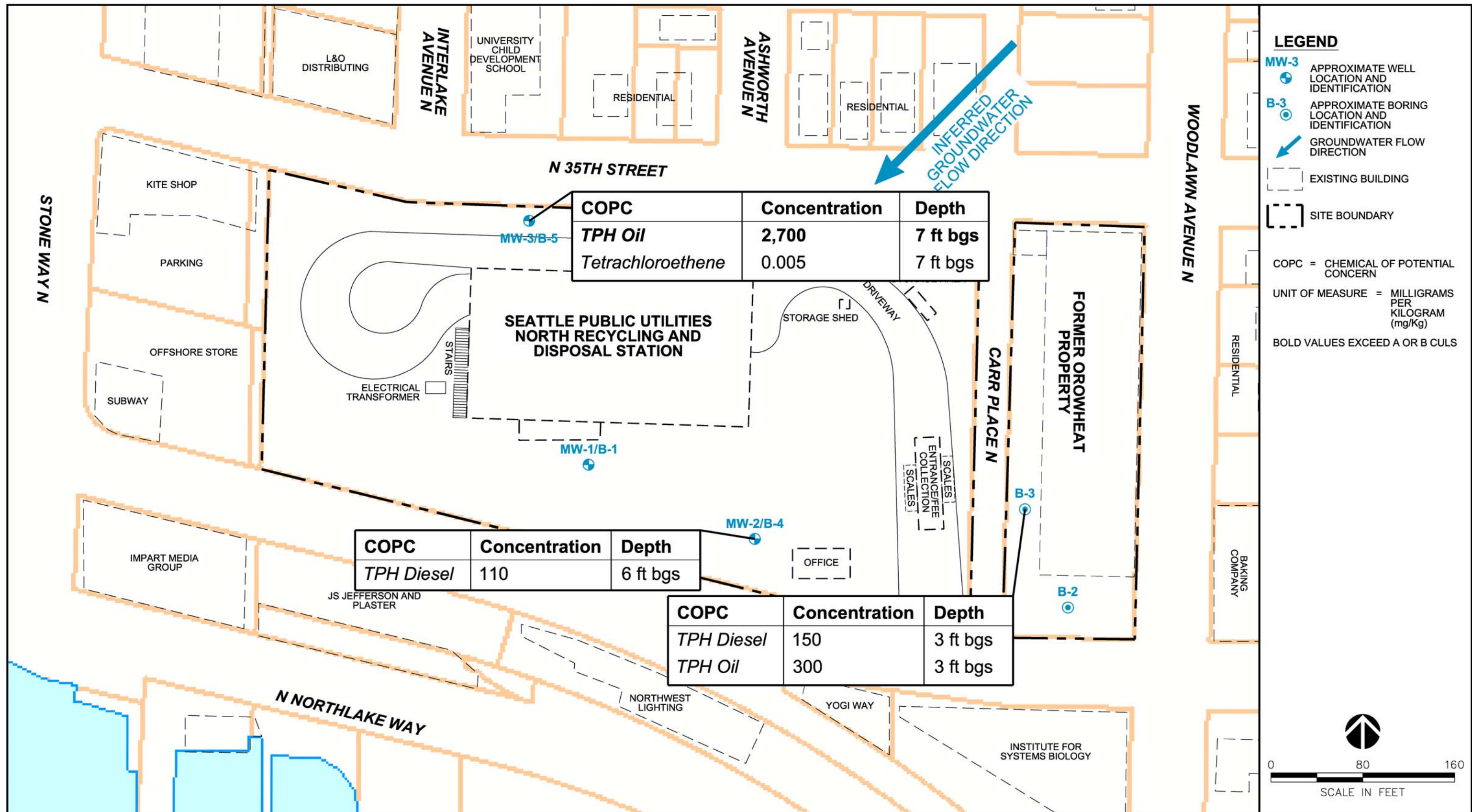
LEGEND

- MW-3 APPROXIMATE WELL LOCATION AND IDENTIFICATION
- B-3 APPROXIMATE BORING LOCATION AND IDENTIFICATION
- GROUNDWATER FLOW DIRECTION
- EXISTING BUILDING
- SITE BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS

0 80 160

SCALE IN FEET

REFERENCE: IMAGE AND 5-FOOT TOPOGRAPHIC CONTOUR LINES OBTAINED FROM KING COUNTY IMAP WEBSITE. AERIAL DATED 2005.	CLIENT LOGO 	CLIENT: SEATTLE PUBLIC UTILITIES	DWN BY: JRS	PROJECT NORTH RECYCLING AND DISPOSAL STATION Seattle, WA	DATE: MARCH 2009
		AMEC Earth & Environmental 11810 North Creek Parkway North Bothell, WA, U.S.A. 98011-8201 	CHK'D BY: CI		PROJECT NO: 8-915-16341-0
			DATUM: NONE	TITLE MONITORING WELL AND SOIL BORING LOCATIONS	REV. NO.:
			PROJECTION: NONE		FIGURE No.
			SCALE: AS SHOWN		4



REFERENCE: IMAGE AND 5-FOOT TOPOGRAPHIC CONTOUR LINES OBTAINED FROM KING COUNTY IMAP WEBSITE. AERIAL DATED 2005.

CLIENT LOGO



CLIENT:

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11810 North Creek Parkway North
Bothell, WA, U.S.A. 98011-8201



DWN BY:

JRS

CHK'D BY:

CI

DATUM:

NONE

PROJECTION:

NONE

SCALE:

AS SHOWN

PROJECT

NORTH RECYCLING AND DISPOSAL STATION

Seattle, WA

TITLE

PETROLEUM AND CHLORINATED SOLVENT
CONCENTRATIONS IN SOIL

DATE:

MARCH 2009

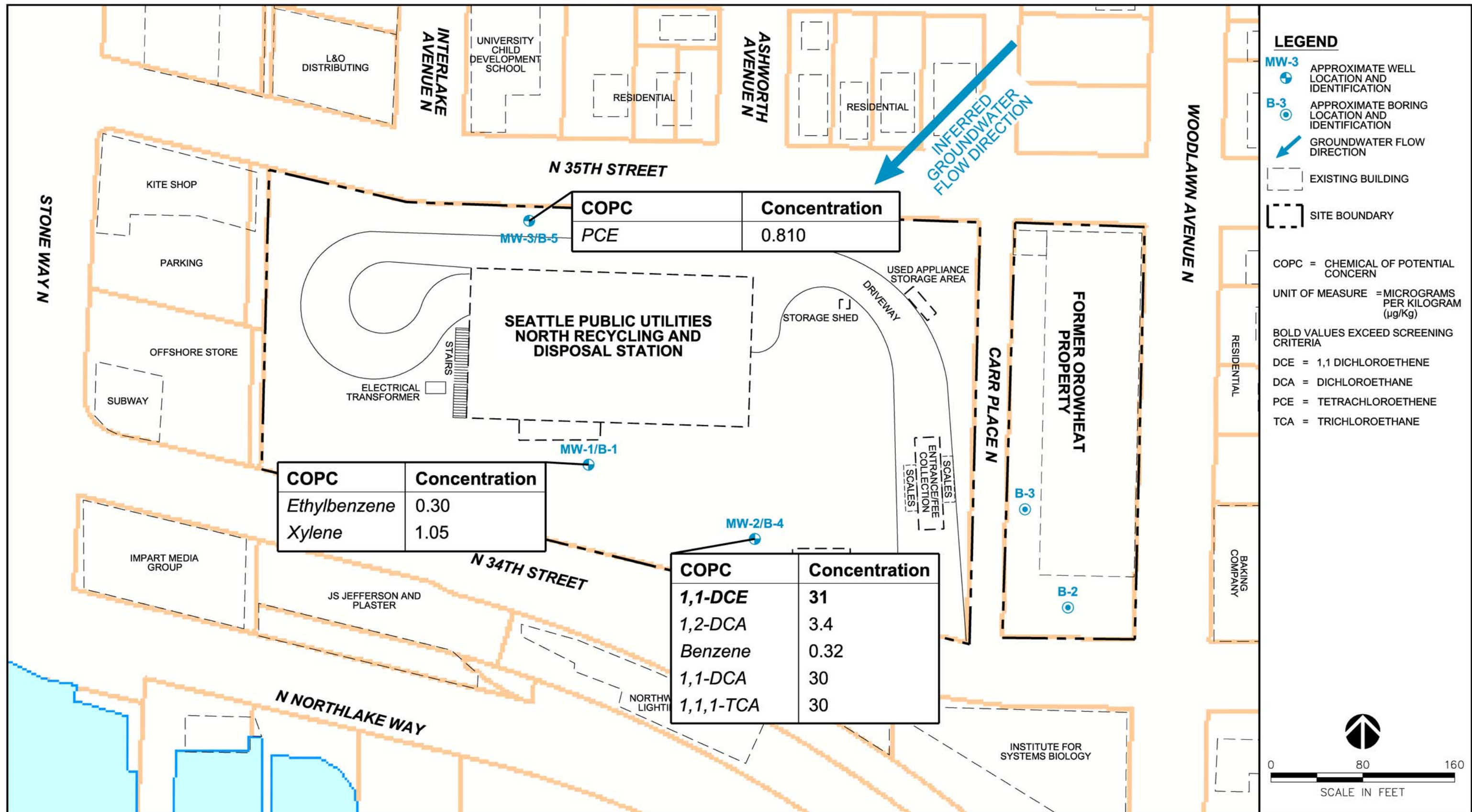
PROJECT NO.:

8-915-16341-0

REV. NO.:

FIGURE No.

5



REFERENCE: IMAGE AND 5-FOOT TOPOGRAPHIC CONTOUR LINES OBTAINED FROM KING COUNTY IMAP WEBSITE. AERIAL DATED 2005.



CLIENT: SEATTLE PUBLIC UTILITIES

AMEC Earth & Environmental
11810 North Creek Parkway North
Bothell, WA, U.S.A. 98011-8201



DWN BY: JRS
CHK'D BY: CI
DATUM: NONE
PROJECTION: NONE
SCALE: AS SHOWN

PROJECT NORTH RECYCLING AND DISPOSAL STATION
Seattle, WA

TITLE PETROLEUM AND CHLORINATED SOLVENT CONCENTRATIONS IN GROUNDWATER

DATE: MARCH 2009
PROJECT NO: 8-915-16341-0
REV. NO.:
FIGURE No. 6

APPENDIX A

Monitoring Well Development Logs

<h2 style="margin: 0;">WELL DEVELOPMENT LOG</h2>	PROJECT _____		WELL NO. <u>MW-1</u>
	JOB NO. _____	SITE _____	PREPARED BY <u>T. PETRICH</u>

METHOD OVERPUMPAGE _____ BAILER _____ SURGE _____ BLOCK _____ AIR LIFT _____ OTHER _____	INITIAL WATER LEVEL <u>7.1 FT.</u> FINAL WATER LEVEL _____ CAPACITY OF CASING (GALLONS/LINEAR FOOT) 2" = 0.16 4" = 0.65 6" = 1.47	REMARKS: <u>NO OPEN OBSERVED.</u> <u>P20 = 0.0 ppm.</u> VOLUME BETWEEN CASING AND HOLE (GALLONS/LINEAR FOOT) (ASSUMING 40% POROSITY) 2" CASING AND 6" HOLE = 0.52 2" CASING AND 8" HOLE = 0.98 4" CASING AND 10" HOLE = 1.37 4" CASING AND 12" HOLE = 2.09
--	--	---

HOLE DIAMETER d_h = _____ WELL CASING INSIDE DIAMETER d_wID = <u>2"</u> OUTSIDE DIAMETER d_wOD = _____ DEPTH TO: WATER LEVEL H = <u>7.1</u> BASE OF SEAL S = _____ BASE OF WELL TD = <u>14.57</u> EST. FILTER PACK POROSITY P = _____		WELL VOLUME CALCULATION: $\text{CASING VOLUME} = V_c = \pi \left(\frac{d_wID}{2} \right)^2 (TD - H) = 3.14 \left(\frac{\quad}{2} \right)^2 (\quad - \quad) = \quad$ $\text{FILTER PACK PORE VOLUME} = V_f = \pi \left[\left(\frac{d_h}{2} \right)^2 - \left(\frac{d_wOD}{2} \right)^2 \right] \{ TD - (S \text{ or } H^*)(P) = \quad$ <p style="text-align: center;">(*if S > H, use S; if S < H, use H)</p> $= 3.14 \left[\left(\frac{\quad}{2} \right)^2 - \left(\frac{\quad}{2} \right)^2 \right] (\quad - \quad) (\quad) = \quad$ TOTAL WELL VOLUME = $V_T = V_c + V_f = \quad + \quad = \quad \text{ft}^3 \times 7.48 = \quad \text{gal.}$
---	--	--

DEVELOPMENT LOG:					CUMULATIVE WATER REMOVED GALLONS	WATER QUALITY						COMMENTS
DATE	TIME BEGIN/END	METHOD	ELAPSED TIME	FLOW RATE (gpm)		pH	TEMP	CONDUCT- TIVITY	D.O.*	REDOX	TURBID- ITY	
3.12.07	1313	H264 ROW PUMP				8.10	11.91	0.691	13.33	289	999+	Silty
"	1315	"	2 min		APPROX. 10 4 gal.	7.46	11.84	0.665	10.32	249	999+	Silty PUMPED DRY
"	1344	"	3 min		APPROX. 5 gal.	7.35	12.34	0.653	10.17	232	357 999+	Silty PUMPED DRY
	1430	"	3 min		APPROX. 5 gal.	7.30	12.13	0.721	10.56	218	911+	Silty PUMPED DRY

WELL DEVELOPMENT LOG		PROJECT		WELL NO. <u>14W-2</u>	
		JOB NO.		SITE	
				PREPARED BY	
METHOD		INITIAL WATER LEVEL <u>5.44</u>		REMARKS:	
OVERPUMPAGE _____		FINAL WATER LEVEL _____		<u>NO ODOM</u>	
BAILER _____		CAPACITY OF CASING (GALLONS/LINEAR FOOT)		<u>P20 = 0.0 ppm.</u>	
SURGE _____		2" = 0.18		VOLUME BETWEEN CASING AND HOLE (GALLONS/LINEAR FOOT)	
BLOCK _____		4" = 0.65		(ASSUMING 40% POROSITY)	
AIR LIFT _____		6" = 1.47		2" CASING AND 8" HOLE - 0.52	
OTHER _____				2" CASING AND 8" HOLE - 0.98	
				4" CASING AND 10" HOLE = 1.37	
				4" CASING AND 12" HOLE - 2.09	

METHOD	
OVERPUMPAGE	_____
BAILER	_____
SURGE	_____
BLOCK	_____
AIR LIFT	_____
OTHER	_____

INITIAL WATER LEVEL 5.44

FINAL WATER LEVEL

CAPACITY OF CASING
(GALLONS/LINEAR FOOT)
$$\begin{aligned} 2'' &= 0.16 \\ 4'' &= 0.65 \\ 6'' &= 1.47 \end{aligned}$$

REMARKS:

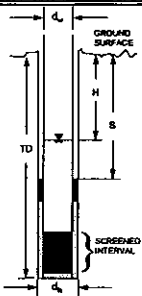
ALL BOOKS

$\rho_{\text{TD}} = 0.0 \text{ ppm.}$

VOLUME BETWEEN CASING AND HOLE
(GALLONS/LINEAR FOOT)
(ASSUMING 40% POROSITY)

2" CASING AND 6" HOLE - 0.52
2" CASING AND 8" HOLE - 0.98
4" CASING AND 10" HOLE = 1.37
4" CASING AND 12" HOLE - 2.09

HOLE DIAMETER	d_h	=	_____
WELL CASING INSIDE DIAMETER	d_{wiD}	=	<u>2</u> "
OUTSIDE DIAMETER	d_{woD}	=	_____
DEPTH TO: WATER LEVEL	H	=	<u>5.66</u>
BASE OF SEAL	S	=	_____
BASE OF WELL	TD	=	<u>17.48</u>
EST. FILTER PACK POROSITY	P	=	_____



WELL VOLUME CALCULATION:

$$\text{CASING VOLUME} = V_c = \pi \left(\frac{d_{wiD}}{2} \right)^2 (TD - H) = 3.14 \left(\frac{\quad}{2} \right)^2 (\quad - \quad) = \quad$$

$$\text{FILTER PACK PORE VOLUME} = V_f = \pi \left[\left(\frac{d_h}{2} \right)^2 - \left(\frac{d_w \text{OD}}{2} \right)^2 \right] \{ \text{TD} - (\text{S or H}^*)(P) = \underline{\hspace{2cm}} \}$$

(*if $S > H$, use S ; if $S < H$, use H)

$$= 3.14 \left[\left(\frac{\quad}{2} \right)^2 - \left(\frac{\quad}{2} \right)^2 \right] (\quad - \quad)(\quad) = \quad$$

TOTAL WELL VOLUME = $V_T = V_c + V_f =$ _____ + _____ = _____ $\text{ft}^3 \times 7.48 =$ _____ gal.

[illegible]

3 min
RE-charge
= 2 FT.
1.5 min
= 2 FT. 7

* = Dissolved Oxygen

APPENDIX B

Groundwater Sample Collection Logs



LOW-FLOW GROUNDWATER SAMPLING LOG

WELL NO: MW-1 LOCATION: SPU North Transfer Station PROJECT NO: 8915163410
 DATE: 03.14.08 TIME: 14:00 CLIMATIC CONDITIONS: overcast periodic light showers
 OVA/PID READING WHEN WELL OPENED: NA DEPTH TO PRODUCT (TOC): NA
 STATIC WATER LEVEL (TOC): 8.692 TOTAL DEPTH OF WELL (TOC): 14.21

METHOD OF REMOVAL: low flow peristaltic pump PUMPING RATE: 1/8 g/min

WELL	DTW	Time	Gallons Removed	Temp. (C°)	pH	Sp. Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	REDOX (mv)
PURGE	7.55	1419	1g	11.35	7.01	0.777	err	10.32	134
DATA	8.42	1421	1 1/8g	11.58	6.61	0.781	err	9.13	133
	7.48	1423	1 3/8g	11.41	6.83	0.794	err	10.29	139
	7.55	1425	1 1/2g	11.35	6.98	0.795	798	12.59	142
	7.61	1427	2g	11.19	7.01	0.798	768	12.23	143
	7.66	1429	2 1/4g	11.29	6.88	0.795	749	10.70	148
	7.72	1431	2 3/4g	11.22	6.90	0.811	err	11.12	142
	7.78	1433	2 3/4g	11.00	7.05	0.838	117	11.33	144
	7.84	1435	3g	11.00	7.08	0.831	97.0	11.44	145
	7.91	1437	3 1/4g	11.01	7.09	0.843	80.7	9.68	140
	7.95	1439	3 1/2g	11.33	6.96	0.848	207	8.48	137
	7.99	1441	3 3/4g	11.16	7.12	0.847	84.7	10.33	138
	8.02	1443	4g	10.95	7.13	0.851	83.7	9.07	134

DO did not calib.

SAMPLE WITHDRAWAL METHOD: bauler SAMPLED BY: LINE + CH
 SAMPLE NUMBER(S) AND TIME: MW-1 + DUP-1 1501

NOTES: DO not functioning properly - cleaned silt off bottom 1413-1416

LAB ANALYSIS PARAMETERS AND PRESERVATIVES: MWTPH-GX (HCl), MWTPH-DX40 (HCl),
UOL (HCl), SUR (none), PCB (none), Pesticides (none),
Herbicides (none), Lab filtered metals (none)

NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 10-40 mL vials, 4-500 mL glass
amber, 2-500 mL poly, 8-1000 mL glass amber

DECON. PROCEDURES: SOND/DI & DI Sps, H₂O level meter, all
other equipment decontaminated & thrown out

SAMPLES DELIVERED TO: On Site TRANSPORTER: _____
 DATE: 03.14.08 TIME: 1746

CAPACITY OF CASING (GALLONS/LINEAR FOOT)
 2" - 0.16 • 4" - 0.66 • 6" - 1.47 • 8" - 2.61 • 10" - 4.08 • 12" - 5.57

Pump on 1413

Pump off 1449

pg 2 of 2

[illegible]

CAPACITY OF CASING (GALLONS/LINEAR FOOT)
2" - 0.16 • 4" - 0.65 • 6" - 1.47 • 8" - 2.61 • 10" - 4.08 • 12" - 5.57

Pumpoff 1449



LOW-FLOW GROUNDWATER SAMPLING LOG

WELL NO: MW-2 LOCATION: SPU North Transfer Station PROJECT NO: 8915-163410
 DATE: 3-14-08 TIME: 11:36 CLIMATIC CONDITIONS: Overcast
 OVA/PID READING WHEN WELL OPENED: NA DEPTH TO PRODUCT (TOC): NA
 STATIC WATER LEVEL (TOC): 5.24 TOTAL DEPTH OF WELL (TOC): 14.21

METHOD OF REMOVAL: low flow peristaltic pumpPUMPING RATE: 2 ~~1/4~~ gal/min

WELL	DTW	Time	Gallons Removed	Temp. (C°)	pH	Sp. Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	REDOX (mv)
PURGE		1151	1/4	11.25	6.30	0.701	121.0	13.01	166
DATA	6.79	1153	1/2	11.28	6.38	0.185	127.0	10.69	167
	7.33	1155	3/4	11.07	6.50	0.713	95.8	11.25	147
	7.86	1157	1	11.07	6.61	0.716	120.0	11.52	145
	8.28	1159	1 1/4	11.30	6.55	0.705	140.0	10.32	147
	8.67	1201	1 1/2	11.79	6.77	0.675	184.0	11.05	158
	8.70	1203	2 1/4	11.86	6.65	0.181	156.0	12.39	150
	8.90	1205	2	11.95	6.45	0.185	158.0	13.71	147
	9.09	1207	2 1/4	11.99	6.82	0.183	140.0	11.64	146
	9.31	1209	2 1/2	11.81	6.86	0.700	110.0	12.17	139
	9.54	1211	3	11.94	6.90	0.184	238.0	11.10	137
	10.81	1213	3 1/4	12.19	6.91	0.181	ERR	11.98	133
	9.44	1215	3 1/2	12.35	6.93	0.188	ERR	13.23	139
	9.19	1217	3 3/4	12.37	6.95	0.687	ERR	13.06	140
	8.97	1219	4 1/4	12.40	6.96	0.686	ERR	14.83	137
	8.71	1221	4 1/2	12.30	7.00	0.658	ERR	13.37	147

SAMPLE WITHDRAWAL METHOD: BailerSAMPLED BY: LME:CHSAMPLE NUMBER(S) AND TIME: MW-21237NOTES: DO not Sanctioning properly turbidity high not developed

LAB ANALYSIS PARAMETERS AND PRESERVATIVES:

pesticides, herbicides, lab filtered metals
NWTPH-6x, NWTPH-Dx, VOC, SVOC, PCB,
(none) (none) (none) (none) (none)

NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

5-40 mL vials, 8-1000 mL glass
amber, 1-500 mL poly, 2-500 mL glass amber

DECON. PROCEDURES:

H₂O/DI + DI w/soap for H₂O level meters, all
other equipment dedicated & thrown out

SAMPLES DELIVERED TO: onsite

TRANSPORTER:

DATE: 03.14.08TIME: 1746

CAPACITY OF CASING (GALLONS/LINEAR FOOT)

2" - 0.16 • 4" - 0.65 • 6" - 1.47 • 8" - 2.61 • 10" - 4.08 • 12" - 5.57

H₂O column = 8.97

1.4 gal x 3 = 4.3 total

DWB

time

9:11

C

pH

mS/cm

NTU

mg/L

MU

8.65

1223

4 1/2

7.00

0.673

0.673

ERR

14.51

130

12.24

7.00

color opaque lt. brn



LOW-FLOW GROUNDWATER SAMPLING LOG

WELL NO: NW-3 LOCATION: SPL 10. T/O/S. STA. PROJECT NO: 8915163410
DATE: 03.14.08 TIME: 0928 CLIMATIC CONDITIONS: 100% sun 40°F
OVA/PID READING WHEN WELL OPENED: NA DEPTH TO PRODUCT (TOC): NA
STATIC WATER LEVEL (TOC): 13.23' TOTAL DEPTH OF WELL (TOC): 19.37' - soft bottom

METHOD OF REMOVAL: low-flow peristaltic pump PUMPING RATE: 1/8 g/min

WELL	DTW	Time	Gallons Removed	Temp. (C)	pH	Sp. Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	REDOX (mv)
PURGE	13.83	10:11	1/4 g	11.93	5.79	0.475	78.8	12.37	227
DATA	14.04	10:14	1/4	11.85	5.77	0.489	36.2	11.73	218
	14.09	10:16	1/4	11.81	5.73	0.502	238	9.88	213
	14.30	10:18	1/4 g	11.19	6.0	0.495	14.6	11.14	208
	14.36	10:20	1/4 g	11.99	5.91	0.497	11.2	11.31	205
	14.48	10:22	2/4	11.90	6.06	0.506	21.4	11.69	201
	14.57	10:24	2/4 g	11.90	5.99	0.498	9.1	9.40	196
	14.68	10:26	2/4 g	11.91	6.03	0.522	13.9	11.12	193
	14.76	10:28	2/4 g	11.93	6.02	0.518	11.3	10.5	190
	14.91	10:30	3 g	11.75	6.11	0.514	11.2	9.59	189

DO did not calibrate

SAMPLE WITHDRAWAL METHOD: boiler SAMPLED BY: LME & CH
SAMPLE NUMBER(S) AND TIME: NW-3 10:50

NOTES: DO not functioning properly on Horizon U22

LAB ANALYSIS PARAMETERS AND PRESERVATIVES: VOC (HCL), SVOC (me),
NWTPH Gx (HCL), NWTPH Dx+O (HCL), PCB (None), Herbs (me),
pestic (me)

NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 5 - 40mL glass vials, 2 - 500mL glass
amber w/HCl, 1 - 500mL poly, 8 - 1000mL glass amber

DECON. PROCEDURES: soapy H₂O + DI for water level meters, all
others were decontaminated & placed in trash

SAMPLES DELIVERED TO: On Site TRANSPORTER: _____
DATE: 03.14.08 TIME: 1746

H₂O column = 6.14'
0.98 x 3 = 2.94

CAPACITY OF CASING (GALLONS/LINEAR FOOT)
2" - 0.15 • 4" - 0.55 • 6" - 1.47 • 8" - 2.61 • 10" - 4.08 • 12" - 5.57

Pump on 10:09 pump off 10:32



Chain of Custody

OnSite
Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: AMEC EASTON ENVIRONMENTAL
Project Number: 0-915-16341-0
Project Name: SPURLOCK TOWER STATION
Project Manager: C. L. LANGE
Sampled by: IMERICKSON CHOWLAND

Turnaround Request
(in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
(TPH analysis 5 working days)

(other)

Laboratory Number:

03-105

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-GX/STX	NWTPH-DX	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
MW-1		03.11.08		GW	16														
MW-2		1232		16															
MW-3		1050		16															
DUP-1				16															
Field blank	3	03.11.08	1534	W	5														
trip blank				W															

Comments/Special Instructions:

Date

Company

Signature

Relinquished by	<u>[Signature]</u>	Date	03.19.08 1740	Comments/Special Instructions	Metals - Lab filtered upon arrival
Received by	<u>[Signature]</u>	Date	03.19.08 1744		
Relinquished by					
Received by					
Relinquished by					
Received by					
Reviewed by/Date					Chromatograms with final report <input type="checkbox"/>



APPENDIX C

Chain-of-Custody Form And Laboratory Analytical Results



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 20, 2008

Cherilyn Inouye
AMEC Earth & Environmental, Inc.
5007 Pacific Highway East, Suite 5
Tacoma, WA 98424

Re: Analytical Data for Project 8915 162890
Laboratory Reference No. 0803-062

Dear Cherilyn:

Enclosed are the analytical results and associated quality control data for samples submitted on March 10, 2008.

Please note that the data for the added Hexavalent Chromium will follow in the final report.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

Case Narrative

Samples were collected on March 10, 2008 and received by the laboratory on March 10, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Volatiles EPA 8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The result for Toluene in samples B-1_5 and B-3_3 may be the result of contaminated sample vials.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Organochlorine Pesticides by EPA 8081A Analysis

Due to negative effects of the matrix on the instrument, values for the analytes 4,4'-DDT and Methoxychlor in the closing continuing calibration verification standard (CCV) were low. Therefore, values for these compounds can be greater than reported. Since the degradation of the CCV standards was reproducible after re-injecting the sample extracts, the CCV degradation problem was attributed to the matrix of these samples.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

NWTPH-Gx

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	B-1_5	B-3_3
Lab ID:	03-062-01	03-062-04

	Result	Flags	PQL	Result	Flags	PQL
TPH-Gas	ND		5.6	ND		6.5
Surrogate Recovery: Fluorobenzene	94%			94%		

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

NWTPH-Gx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0312S1

	Result	Flags	PQL
TPH-Gas	ND		5.0
Surrogate Recovery: Fluorobenzene	99%		

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

NWTPH-Gx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-12-08

Date Analyzed: 3-12-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID:	03-062-01 Original	03-062-01 Duplicate	RPD	Flags
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	94%	94%		

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

NWTPH-Dx

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	B-1_5	B-3_3
Lab ID:	03-062-01	03-062-04
Diesel Range:	ND	150
PQL:	29	31
Identification:	---	Diesel Fuel#2
Lube Oil Range:	ND	300
PQL:	57	62
Identification:	---	Lube Oil
Surrogate Recovery		
o-Terphenyl:	84%	72%
Flags:	Y	Y

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0312S1

Diesel Range: **ND**
PQL: 25
Identification: ---

Lube Oil Range: **ND**
PQL: 50
Identification: ---

Surrogate Recovery
o-Terphenyl: 88%

Flags: Y

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-062-01 03-062-01 DUP

Diesel Range: **ND** **ND**
PQL: 25 25

RPD: N/A

Surrogate Recovery
o-Terphenyl: 84% 75%

Flags: Y Y

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 3-14-08

Date Analyzed: 3-14-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-062-01

Client ID: B-1_5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00090
Chloromethane	ND		0.0045
Vinyl Chloride	ND		0.00090
Bromomethane	ND		0.00090
Chloroethane	ND		0.0045
Trichlorofluoromethane	ND		0.00090
1,1-Dichloroethene	ND		0.00090
Acetone	0.014		0.0045
Iodomethane	ND		0.0045
Carbon Disulfide	ND		0.00090
Methylene Chloride	ND		0.0045
(trans) 1,2-Dichloroethene	ND		0.00090
Methyl t-Butyl Ether	ND		0.00090
1,1-Dichloroethane	ND		0.00090
Vinyl Acetate	ND		0.0045
2,2-Dichloropropane	ND		0.00090
(cis) 1,2-Dichloroethene	ND		0.00090
2-Butanone	ND		0.0045
Bromochloromethane	ND		0.00090
Chloroform	ND		0.00090
1,1,1-Trichloroethane	ND		0.00090
Carbon Tetrachloride	ND		0.00090
1,1-Dichloropropene	ND		0.00090
Benzene	ND		0.00090
1,2-Dichloroethane	ND		0.00090
Trichloroethene	ND		0.00090
1,2-Dichloropropane	ND		0.00090
Dibromomethane	ND		0.00090
Bromodichloromethane	ND		0.00090
2-Chloroethyl Vinyl Ether	ND		0.0045
(cis) 1,3-Dichloropropene	ND		0.00090
Methyl Isobutyl Ketone	ND		0.0045
Toluene	0.0022	Z	0.00090
(trans) 1,3-Dichloropropene	ND		0.00090

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
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Lab ID: 03-062-01
 Client ID: B-1_5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00090
Tetrachloroethene	ND		0.00090
1,3-Dichloropropane	ND		0.00090
2-Hexanone	ND		0.0045
Dibromochloromethane	ND		0.00090
1,2-Dibromoethane	ND		0.00090
Chlorobenzene	ND		0.00090
1,1,1,2-Tetrachloroethane	ND		0.00090
Ethylbenzene	ND		0.00090
m,p-Xylene	ND		0.0018
o-Xylene	ND		0.00090
Styrene	ND		0.00090
Bromoform	ND		0.00090
Isopropylbenzene	ND		0.00090
Bromobenzene	ND		0.00090
1,1,2,2-Tetrachloroethane	ND		0.00090
1,2,3-Trichloropropane	ND		0.00090
n-Propylbenzene	ND		0.00090
2-Chlorotoluene	ND		0.00090
4-Chlorotoluene	ND		0.00090
1,3,5-Trimethylbenzene	ND		0.00090
tert-Butylbenzene	ND		0.00090
1,2,4-Trimethylbenzene	ND		0.00090
sec-Butylbenzene	ND		0.00090
1,3-Dichlorobenzene	ND		0.00090
p-Isopropyltoluene	ND		0.00090
1,4-Dichlorobenzene	ND		0.00090
1,2-Dichlorobenzene	ND		0.00090
n-Butylbenzene	ND		0.00090
1,2-Dibromo-3-chloropropane	ND		0.0045
1,2,4-Trichlorobenzene	ND		0.00090
Hexachlorobutadiene	ND		0.0045
Naphthalene	ND		0.00090
1,2,3-Trichlorobenzene	ND		0.00090

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	77	70-118
Toluene-d8	95	70-121
4-Bromofluorobenzene	82	70-130

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

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Date Extracted: 3-14-08
 Date Analyzed: 3-14-08
 Matrix: Soil
 Units: mg/kg (ppm)
 Lab ID: 03-062-04
 Client ID: B-3_3

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0053
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0053
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0053
Iodomethane	ND		0.0053
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0053
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0053
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0053
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0053
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0053
Toluene	0.0030	Z	0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
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 Project: 8915 162890

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Lab ID: 03-062-04

Client ID: B-3_3

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0053
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0021
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0053
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0053
Naphthalene	ND		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	82	70-118
Toluene-d8	90	70-121
4-Bromofluorobenzene	95	70-130

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

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Date Extracted: 3-14-08
 Date Analyzed: 3-14-08

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: MB0314S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0050
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0050
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Acetone	ND		0.0050
Iodomethane	ND		0.0050
Carbon Disulfide	ND		0.0010
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
Methyl t-Butyl Ether	ND		0.0010
1,1-Dichloroethane	ND		0.0010
Vinyl Acetate	ND		0.0050
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
2-Butanone	ND		0.0050
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
Benzene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
Methyl Isobutyl Ketone	ND		0.0050
Toluene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
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VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

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Lab ID: MB0314S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
2-Hexanone	ND		0.0050
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Ethylbenzene	ND		0.0010
m,p-Xylene	ND		0.0020
o-Xylene	ND		0.0010
Styrene	ND		0.0010
Bromoform	ND		0.0010
Isopropylbenzene	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
n-Propylbenzene	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3,5-Trimethylbenzene	ND		0.0010
tert-Butylbenzene	ND		0.0010
1,2,4-Trimethylbenzene	ND		0.0010
sec-Butylbenzene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
p-Isopropyltoluene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
n-Butylbenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
Naphthalene	ND		0.0010
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	70	70-118
Toluene-d8	91	70-121
4-Bromofluorobenzene	79	70-130

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**VOLATILES by EPA 8260B
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-14-08

Date Analyzed: 3-14-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: SB0314S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0373	75	0.0412	82	70-130	
Benzene	0.0500	0.0419	84	0.0422	84	70-127	
Trichloroethene	0.0500	0.0404	81	0.0449	90	73-117	
Toluene	0.0500	0.0410	82	0.0436	87	78-115	
Chlorobenzene	0.0500	0.0410	82	0.0418	84	80-117	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	10	10	
Benzene	1	11	
Trichloroethene	11	13	
Toluene	6	12	
Chlorobenzene	2	10	

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM

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Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-062-03

Client ID: B-1_8

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.037
Pyridine	ND		0.037
Phenol	ND		0.037
Aniline	ND		0.037
bis(2-Chloroethyl)ether	ND		0.037
2-Chlorophenol	ND		0.037
1,3-Dichlorobenzene	ND		0.037
1,4-Dichlorobenzene	ND		0.037
Benzyl alcohol	ND		0.037
1,2-Dichlorobenzene	ND		0.037
2-Methylphenol (o-Cresol)	ND		0.037
bis(2-Chloroisopropyl)ether	ND		0.037
(3+4)-Methylphenol (m,p-Cresol)	ND		0.037
N-Nitroso-di-n-propylamine	ND		0.037
Hexachloroethane	ND		0.037
Nitrobenzene	ND		0.037
Isophorone	ND		0.037
2-Nitrophenol	ND		0.037
2,4-Dimethylphenol	ND		0.037
bis(2-Chloroethoxy)methane	ND		0.037
2,4-Dichlorophenol	ND		0.037
1,2,4-Trichlorobenzene	ND		0.037
Naphthalene	ND		0.0074
4-Chloroaniline	ND		0.037
Hexachlorobutadiene	ND		0.037
4-Chloro-3-methylphenol	ND		0.037
2-Methylnaphthalene	ND		0.0074
1-Methylnaphthalene	ND		0.0074

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
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 Project: 8915 162890

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Lab ID: 03-062-03
 Client ID: B-1_8

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.037
2,4,6-Trichlorophenol	ND		0.037
2,3-Dichloroaniline	ND		0.037
2,4,5-Trichlorophenol	ND		0.037
2-Chloronaphthalene	ND		0.037
2-Nitroaniline	ND		0.037
1,4-Dinitrobenzene	ND		0.037
Dimethylphthalate	ND		0.037
1,3-Dinitrobenzene	ND		0.037
2,6-Dinitrotoluene	ND		0.037
1,2-Dinitrobenzene	ND		0.037
Acenaphthylene	ND		0.0074
3-Nitroaniline	ND		0.037
2,4-Dinitrophenol	ND		0.19
Acenaphthene	ND		0.0074
4-Nitrophenol	ND		0.037
2,4-Dinitrotoluene	ND		0.037
Dibenzofuran	ND		0.037
2,3,4,6-Tetrachlorophenol	ND		0.037
2,3,5,6-Tetrachlorophenol	ND		0.037
Diethylphthalate	ND		0.037
4-Chlorophenyl-phenylether	ND		0.037
4-Nitroaniline	ND		0.037
Fluorene	ND		0.0074
4,6-Dinitro-2-methylphenol	ND		0.19
N-Nitrosodiphenylamine	ND		0.037
1,2-Diphenylhydrazine	ND		0.037
4-Bromophenyl-phenylether	ND		0.037
Hexachlorobenzene	ND		0.037
Pentachlorophenol	ND		0.19
Phenanthrene	ND		0.0074
Anthracene	ND		0.0074
Carbazole	ND		0.037
Di-n-butylphthalate	0.041		0.037
Fluoranthene	ND		0.0074

Date of Report: March 20, 2008
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Lab ID: 03-062-03
 Client ID: B-1_8

Compound:	Results	Flags	PQL
Benzidine	ND		0.37
Pyrene	ND		0.0074
Butylbenzylphthalate	ND		0.037
bis-2-Ethylhexyladipate	ND		0.037
3,3'-Dichlorobenzidine	ND		0.037
Benzo[a]anthracene	ND		0.0074
Chrysene	ND		0.0074
bis(2-Ethylhexyl)phthalate	ND		0.037
Di-n-octylphthalate	ND		0.037
Benzo[b]fluoranthene	ND		0.0074
Benzo[k]fluoranthene	ND		0.0074
Benzo[a]pyrene	ND		0.0074
Indeno[1,2,3-cd]pyrene	ND		0.0074
Dibenz[a,h]anthracene	ND		0.0074
Benzo[g,h,i]perylene	ND		0.0074

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	73	39 - 90
Phenol-d6	88	40 - 100
Nitrobenzene-d5	81	30 - 100
2-Fluorobiphenyl	84	41 - 100
2,4,6-Tribromophenol	88	53 - 105
Terphenyl-d14	100	49 - 115

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM

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Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-062-04
 Client ID: B-3_3

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.041
Pyridine	ND		0.041
Phenol	ND		0.041
Aniline	ND		0.041
bis(2-Chloroethyl)ether	ND		0.041
2-Chlorophenol	ND		0.041
1,3-Dichlorobenzene	ND		0.041
1,4-Dichlorobenzene	ND		0.041
Benzyl alcohol	ND		0.041
1,2-Dichlorobenzene	ND		0.041
2-Methylphenol (o-Cresol)	ND		0.041
bis(2-Chloroisopropyl)ether	ND		0.041
(3+4)-Methylphenol (m,p-Cresol)	ND		0.041
N-Nitroso-di-n-propylamine	ND		0.041
Hexachloroethane	ND		0.041
Nitrobenzene	ND		0.041
Isophorone	ND		0.041
2-Nitrophenol	ND		0.041
2,4-Dimethylphenol	ND		0.041
bis(2-Chloroethoxy)methane	ND		0.041
2,4-Dichlorophenol	ND		0.041
1,2,4-Trichlorobenzene	ND		0.041
Naphthalene	ND		0.0082
4-Chloroaniline	ND		0.041
Hexachlorobutadiene	ND		0.041
4-Chloro-3-methylphenol	ND		0.041
2-Methylnaphthalene	ND		0.0082
1-Methylnaphthalene	ND		0.0082

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
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Lab ID: 03-062-04
 Client ID: B-3_3

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.041
2,4,6-Trichlorophenol	ND		0.041
2,3-Dichloroaniline	ND		0.041
2,4,5-Trichlorophenol	ND		0.041
2-Chloronaphthalene	ND		0.041
2-Nitroaniline	ND		0.041
1,4-Dinitrobenzene	ND		0.041
Dimethylphthalate	ND		0.041
1,3-Dinitrobenzene	ND		0.041
2,6-Dinitrotoluene	ND		0.041
1,2-Dinitrobenzene	ND		0.041
Acenaphthylene	ND		0.0082
3-Nitroaniline	ND		0.041
2,4-Dinitrophenol	ND		0.21
Acenaphthene	ND		0.0082
4-Nitrophenol	ND		0.041
2,4-Dinitrotoluene	ND		0.041
Dibenzofuran	ND		0.041
2,3,4,6-Tetrachlorophenol	ND		0.041
2,3,5,6-Tetrachlorophenol	ND		0.041
Diethylphthalate	ND		0.041
4-Chlorophenyl-phenylether	ND		0.041
4-Nitroaniline	ND		0.041
Fluorene	ND		0.0082
4,6-Dinitro-2-methylphenol	ND		0.21
N-Nitrosodiphenylamine	ND		0.041
1,2-Diphenylhydrazine	ND		0.041
4-Bromophenyl-phenylether	ND		0.041
Hexachlorobenzene	ND		0.041
Pentachlorophenol	ND		0.21
Phenanthrene	0.013		0.0082
Anthracene	ND		0.0082
Carbazole	ND		0.041
Di-n-butylphthalate	0.071		0.041
Fluoranthene	ND		0.0082

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
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 Project: 8915 162890

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Lab ID: 03-062-04
 Client ID: B-3_3

Compound:	Results	Flags	PQL
Benzidine	ND		0.41
Pyrene	0.011		0.0082
Butylbenzylphthalate	ND		0.041
bis-2-Ethylhexyladipate	ND		0.041
3,3'-Dichlorobenzidine	ND		0.041
Benzo[a]anthracene	ND		0.0082
Chrysene	ND		0.0082
bis(2-Ethylhexyl)phthalate	0.052		0.041
Di-n-octylphthalate	ND		0.041
Benzo[b]fluoranthene	ND		0.0082
Benzo[k]fluoranthene	ND		0.0082
Benzo[a]pyrene	ND		0.0082
Indeno[1,2,3-cd]pyrene	ND		0.0082
Dibenz[a,h]anthracene	ND		0.0082
Benzo[g,h,i]perylene	ND		0.0082

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	77	39 - 90
Phenol-d6	94	40 - 100
Nitrobenzene-d5	85	30 - 100
2-Fluorobiphenyl	88	41 - 100
2,4,6-Tribromophenol	91	53 - 105
Terphenyl-d14	98	49 - 115

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**SEMIVOLATILES by EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: MB0312S1

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.033
Pyridine	ND		0.033
Phenol	ND		0.033
Aniline	ND		0.033
bis(2-Chloroethyl)ether	ND		0.033
2-Chlorophenol	ND		0.033
1,3-Dichlorobenzene	ND		0.033
1,4-Dichlorobenzene	ND		0.033
Benzyl alcohol	ND		0.033
1,2-Dichlorobenzene	ND		0.033
2-Methylphenol (o-Cresol)	ND		0.033
bis(2-Chloroisopropyl)ether	ND		0.033
(3+4)-Methylphenol (m,p-Cresol)	ND		0.033
N-Nitroso-di-n-propylamine	ND		0.033
Hexachloroethane	ND		0.033
Nitrobenzene	ND		0.033
Isophorone	ND		0.033
2-Nitrophenol	ND		0.033
2,4-Dimethylphenol	ND		0.033
bis(2-Chloroethoxy)methane	ND		0.033
2,4-Dichlorophenol	ND		0.033
1,2,4-Trichlorobenzene	ND		0.033
Naphthalene	ND		0.0067
4-Chloroaniline	ND		0.033
Hexachlorobutadiene	ND		0.033
4-Chloro-3-methylphenol	ND		0.033
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067

Date of Report: March 20, 2008
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SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Lab ID: MB0312S1

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.033
2,4,6-Trichlorophenol	ND		0.033
2,3-Dichloroaniline	ND		0.033
2,4,5-Trichlorophenol	ND		0.033
2-Chloronaphthalene	ND		0.033
2-Nitroaniline	ND		0.033
1,4-Dinitrobenzene	ND		0.033
Dimethylphthalate	ND		0.033
1,3-Dinitrobenzene	ND		0.033
2,6-Dinitrotoluene	ND		0.033
1,2-Dinitrobenzene	ND		0.033
Acenaphthylene	ND		0.0067
3-Nitroaniline	ND		0.033
2,4-Dinitrophenol	ND		0.17
Acenaphthene	ND		0.0067
4-Nitrophenol	ND		0.033
2,4-Dinitrotoluene	ND		0.033
Dibenzofuran	ND		0.033
2,3,4,6-Tetrachlorophenol	ND		0.033
2,3,5,6-Tetrachlorophenol	ND		0.033
Diethylphthalate	ND		0.033
4-Chlorophenyl-phenylether	ND		0.033
4-Nitroaniline	ND		0.033
Fluorene	ND		0.0067
4,6-Dinitro-2-methylphenol	ND		0.17
N-Nitrosodiphenylamine	ND		0.033
1,2-Diphenylhydrazine	ND		0.033
4-Bromophenyl-phenylether	ND		0.033
Hexachlorobenzene	ND		0.033
Pentachlorophenol	ND		0.17
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Carbazole	ND		0.033
Di-n-butylphthalate	ND		0.033
Fluoranthene	ND		0.0067

Date of Report: March 20, 2008
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SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Lab ID: MB0312S1

Compound:	Results	Flags	PQL
Benzidine	ND		0.33
Pyrene	ND		0.0067
Butylbenzylphthalate	ND		0.033
bis-2-Ethylhexyladipate	ND		0.033
3,3'-Dichlorobenzidine	ND		0.033
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
bis(2-Ethylhexyl)phthalate	ND		0.033
Di-n-octylphthalate	ND		0.033
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno[1,2,3-cd]pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	76	39 - 90
Phenol-d6	90	40 - 100
Nitrobenzene-d5	84	30 - 100
2-Fluorobiphenyl	87	41 - 100
2,4,6-Tribromophenol	90	53 - 105
Terphenyl-d14	103	49 - 115

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**SEMIVOLATILES by EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-12-08

Date Analyzed: 3-12-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: SB0312S1

Compound:	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
Phenol	1.33	1.12	84	0.993	75	36-97	
2-Chlorophenol	1.33	1.10	83	0.950	71	32-100	
1,4-Dichlorobenzene	0.667	0.450	67	0.382	57	24-94	
N-Nitroso-di-n-propylamine	0.667	0.567	85	0.483	72	34-99	
1,2,4-Trichlorobenzene	0.667	0.429	64	0.368	55	23-85	
4-Chloro-3-methylphenol	1.33	1.18	89	1.18	88	46-108	
Acenaphthene	0.667	0.527	79	0.499	75	37-101	
2,4-Dinitrotoluene	0.667	0.605	91	0.606	91	41-116	
4-Nitrophenol	1.33	1.44	108	1.50	113	48-116	
Pentachlorophenol	1.33	1.21	91	1.25	94	28-130	
Pyrene	0.667	0.631	95	0.649	97	46-117	

	RPD	RPD Limits	Flags
Phenol	12	29	
2-Chlorophenol	14	28	
1,4-Dichlorobenzene	16	27	
N-Nitroso-di-n-propylamine	16	30	
1,2,4-Trichlorobenzene	15	28	
4-Chloro-3-methylphenol	0	22	
Acenaphthene	6	25	
2,4-Dinitrotoluene	0	30	
4-Nitrophenol	4	30	
Pentachlorophenol	3	30	
Pyrene	3	20	

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

PCBs by EPA 8082

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-1_3					
Laboratory ID:	03-062-02					
Aroclor 1016	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1221	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1232	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1242	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1248	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1254	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1260	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1262	ND	0.057	EPA 8082	3-12-08	3-12-08	
Aroclor 1268	ND	0.057	EPA 8082	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	85	39-118				
Client ID:	B-3_6					
Laboratory ID:	03-062-05					
Aroclor 1016	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1221	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1232	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1242	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1248	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1254	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1260	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1262	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1268	ND	0.056	EPA 8082	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	90	39-118				

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**PCBs by EPA 8082
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0312S1					
Aroclor 1016	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1221	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1232	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1242	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1248	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1254	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1260	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1262	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1268	ND	0.050	EPA 8082	3-12-08	3-12-08	
Surrogate:	Percent Recovery	Control Limits				
DCB	101	39-118				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	03-062-05									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.444	0.456	0.500	0.500	ND	89	91	35-120	3	17
Surrogate:										
DCB						93	92	39-118		

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**ORGANOCHLORINE
PESTICIDES by EPA 8081A**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-1_3					
Laboratory ID:	03-062-02					
alpha-BHC	ND	5.7	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	5.7	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	5.7	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	5.7	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	5.7	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	5.7	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	5.7	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	11	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	11	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	5.7	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	11	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	11	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	11	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	11	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	57	EPA 8081	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	72	36-108				
DCB	63	30-115				

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-3_6					
Laboratory ID:	03-062-05					
alpha-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	5.0	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	5.0	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	5.0	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	10	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	10	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	5.0	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	10	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	10	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	10	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	10	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	50	EPA 8081	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	78	36-108				
DCB	75	30-115				

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
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 Project: 8915 162890

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A
 QUALITY CONTROL**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0312S1					
alpha-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	5.0	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	5.0	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	5.0	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	10	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	10	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	5.0	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	10	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	10	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	10	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	10	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	50	EPA 8081	3-12-08	3-12-08	
Surrogate:	Percent Recovery	Control Limits				
TCMX	82	36-108				
DCB	77	30-115				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES								
Laboratory ID:	03-062-05							
	MS	MSD	MS	MSD	MS	MSD		
gamma-BHC	41.8	39.3	50.0	50.0	ND	84 79	39-106	6 12
Heptachlor	39.3	37.3	50.0	50.0	ND	79 75	33-107	5 13
Aldrin	39.2	37.4	50.0	50.0	ND	78 75	36-101	5 12
Dieldrin	98.1	93.0	125	125	ND	78 74	33-115	5 11
Endrin	99.4	94.8	125	125	ND	80 76	35-108	5 11
4,4'-DDT	98.4	94.3	125	125	ND	79 75	24-122	4 17
Surrogate:								
TCMX					74	71	36-108	
DCB					72	70	30-115	

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**CHLORINATED ACID
 HERBICIDES by EPA 8151A**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-1_3					
Laboratory ID:	03-062-02					
Dalapon	ND	260	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	53	EPA 8151	3-18-08	3-18-08	
MCP	ND	5300	EPA 8151	3-18-08	3-18-08	
MCPA	ND	5300	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	54	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	53	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	1.1	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	54	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	54	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	54	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	54	EPA 8151	3-18-08	3-18-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCAA	72	37-114				
Client ID:	B-3_6					
Laboratory ID:	03-062-05					
Dalapon	ND	250	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	52	EPA 8151	3-18-08	3-18-08	
MCP	ND	5200	EPA 8151	3-18-08	3-18-08	
MCPA	ND	5200	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	52	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	52	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	1.1	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	53	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	53	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	53	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	53	EPA 8151	3-18-08	3-18-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCAA	68	37-114				

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**CHLORINATED ACID
 HERBICIDES by EPA 8151A
 QUALITY CONTROL**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0318S1					
Dalapon	ND	230	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	47	EPA 8151	3-18-08	3-18-08	
MCPPE	ND	4700	EPA 8151	3-18-08	3-18-08	
MCPA	ND	4700	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	47	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	47	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	0.95	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	48	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	47	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	47	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	47	EPA 8151	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCAA	70	37-114				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-062-05										
	MS	MSD	MS	MSD		MS	MSD				
Dicamba	77.7	76.9	100	100	ND	78	77	62-99	1	10	
2,4-D	71.5	69.1	100	100	ND	72	69	23-111	3	24	
2,4,5-T	79.5	75.5	100	100	ND	79	76	38-120	5	12	
2,4-DB	90.3	83.9	100	100	ND	90	84	44-135	7	16	
Surrogate:											
DCAA						80	79	37-114			

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

**TOTAL METALS
EPA 6010B/7471A**

Date Extracted: 3-13&14-08

Date Analyzed: 3-13&17-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-062-02

Client ID: B-1_3

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Barium	6010B	46	2.8
Cadmium	6010B	ND	0.57
Chromium	6010B	32	0.57
Lead	6010B	ND	5.7
Mercury	7471A	ND	0.28
Selenium	6010B	ND	11
Silver	6010B	ND	0.57

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

**TOTAL METALS
EPA 6010B/7471A**

Date Extracted: 3-13&14-08
Date Analyzed: 3-13&17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-062-05
Client ID: B-3_6

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Barium	6010B	46	2.8
Cadmium	6010B	ND	0.56
Chromium	6010B	22	0.56
Lead	6010B	ND	5.6
Mercury	7471A	ND	0.28
Selenium	6010B	ND	11
Silver	6010B	ND	0.56

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

**TOTAL METALS
EPA 6010B/7471A
METHOD BLANK QUALITY CONTROL**

Date Extracted: 3-13&14-08
Date Analyzed: 3-13&17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0313S2&MB0314S2

Analyte	Method	Result	PQL
Arsenic	6010B	ND	10
Barium	6010B	ND	2.5
Cadmium	6010B	ND	0.50
Chromium	6010B	ND	0.50
Lead	6010B	ND	5.0
Mercury	7471A	ND	0.25
Selenium	6010B	ND	10
Silver	6010B	ND	0.50

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**TOTAL METALS
 EPA 6010B/7471A
 DUPLICATE QUALITY CONTROL**

Date Extracted: 3-13&14-08
 Date Analyzed: 3-13&17-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-087-19

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	13.7	13.0	5	10	
Barium	87.8	84.6	4	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	35.0	33.0	6	0.50	
Lead	13.5	15.1	12	5.0	
Mercury	ND	ND	NA	0.25	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	0.50	

Date of Report: March 20, 2008
 Samples Submitted: March 10, 2008
 Laboratory Reference: 0803-062
 Project: 8915 162890

**TOTAL METALS
 EPA 6010B/7471A
 MS/MSD QUALITY CONTROL**

Date Extracted: 3-13&14-08
 Date Analyzed: 3-13&17-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-087-19

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	103	90	105	91	2	
Barium	100	185	97	193	105	5	
Cadmium	50	47.6	95	48.2	96	1	
Chromium	100	129	94	128	93	0	
Lead	250	244	92	267	102	9	
Mercury	0.50	0.494	99	0.504	101	2	
Selenium	100	87.5	87	88.3	88	1	
Silver	25	21.9	88	22.1	88	1	

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A**

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
METHOD BLANK QUALITY CONTROL**

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
DUPLICATE QUALITY CONTROL**

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
MS/MSD QUALITY CONTROL**

Date of Report: March 20, 2008
Samples Submitted: March 10, 2008
Laboratory Reference: 0803-062
Project: 8915 162890

% MOISTURE

Date Analyzed: 3-12-08

Client ID	Lab ID	% Moisture
B-1_5	03-062-01	13
B-1_3	03-062-02	12
B-1_8	03-062-03	10
B-3_3	03-062-04	19
B-3_6	03-062-05	10



Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

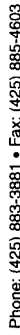
Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z - Analyte may have been introduced by an outside source. See case narrative.

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference



Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 26, 2008

Cherilyn Inouye
AMEC Earth & Environmental, Inc.
5007 Pacific Highway East, Suite 5
Tacoma, WA 98424

Re: Analytical Data for Project 8-915-16341-0
Laboratory Reference No. 0803-105

Dear Cherilyn:

Enclosed are the analytical results and associated quality control data for samples submitted on March 14, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", followed by a horizontal line.

David Baumeister
Project Manager

Enclosures

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

Case Narrative

Samples were collected on March 14, 2008 and received by the laboratory on March 14, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Gx

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: ug/L (ppb)

Client ID: **MW-1**
Lab ID: 03-105-01

MW-2
03-105-02

	Result	Flags	PQL	Result	Flags	PQL
TPH-Gas	ND		100	ND		100
Surrogate Recovery: Fluorobenzene	110%			113%		

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Gx

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: ug/L (ppb)

Client ID: **MW-3**
Lab ID: 03-105-03

DUP-1
03-105-04

	Result	Flags	PQL	Result	Flags	PQL
TPH-Gas	ND		100	ND		100
Surrogate Recovery: Fluorobenzene	112%			112%		

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Gx

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: ug/L (ppb)

Client ID: **field blank_3**
Lab ID: 03-105-05

	Result	Flags	PQL
TPH-Gas	ND		100
Surrogate Recovery: Fluorobenzene	111%		

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Gx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0320W3

	Result	Flags	PQL
TPH-Gas	ND		100
Surrogate Recovery: Fluorobenzene	111%		

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Gx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: ug/L (ppb)

Lab ID:	03-145-03 Original	03-145-03 Duplicate	RPD	Flags
TPH-Gas	ND	ND	NA	
Surrogate Recovery: Fluorobenzene	115%	114%		

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

NWTPH-Dx

Date Extracted: 3-24-08
 Date Analyzed: 3-24-08

Matrix: Water
 Units: mg/L (ppm)

Client ID:	MW-1	MW-2	MW-3
Lab ID:	03-105-01	03-105-02	03-105-03
Diesel Range:	ND	ND	ND
PQL:	0.27	0.26	0.27
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	0.43	0.42	0.43
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	84%	89%	92%
Flags:	Y	Y	Y

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Dx

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Water
Units: mg/L (ppm)

Client ID: **DUP-1**
Lab ID: 03-105-04

Diesel Range: **ND**
PQL: 0.28
Identification: ---

Lube Oil Range: **ND**
PQL: 0.45
Identification: ---

Surrogate Recovery
o-Terphenyl: 88%

Flags: Y

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Water
Units: mg/L (ppm)

Lab ID: MB0324W1

Diesel Range: **ND**
PQL: 0.25
Identification: ---

Lube Oil Range: **ND**
PQL: 0.40
Identification: ---

Surrogate Recovery
o-Terphenyl: 84%

Flags: Y

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Water
Units: mg/L (ppm)

Lab ID: 03-105-01 03-105-01 DUP

Diesel Range: **ND** **ND**
PQL: 0.27 0.26

RPD: N/A

Surrogate Recovery
o-Terphenyl: 84% 81%

Flags: Y Y

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

VOLATILES by EPA 8260B

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Date Extracted: 3-19-08
 Date Analyzed: 3-19-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-105-01
 Client ID: MW-1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

VOLATILES by EPA 8260B

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Lab ID: 03-105-01
 Client ID: MW-1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	0.32		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	0.30		0.20
m,p-Xylene	0.75		0.40
o-Xylene	0.30		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	86	71-126
Toluene-d8	84	76-116
4-Bromofluorobenzene	76	70-123

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

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Date Extracted: 3-19-08

Date Analyzed: 3-19-08

Matrix: Water

Units: ug/L (ppb)

Lab ID: 03-105-02

Client ID: MW-2

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	31		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	30		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	0.66		0.20
1,1,1-Trichloroethane	30		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	0.32		0.20
1,2-Dichloroethane	3.4		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

VOLATILES by EPA 8260B

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Lab ID: 03-105-02
 Client ID: **MW-2**

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	85	71-126
Toluene-d8	84	76-116
4-Bromofluorobenzene	76	70-123

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

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Date Extracted: 3-19-08

Date Analyzed: 3-19-08

Matrix: Water

Units: ug/L (ppb)

Lab ID: 03-105-03

Client ID: MW-3

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

VOLATILES by EPA 8260B

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Lab ID: 03-105-03
 Client ID: **MW-3**

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	0.81		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	71-126
Toluene-d8	84	76-116
4-Bromofluorobenzene	74	70-123

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

VOLATILES by EPA 8260B

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Date Extracted: 3-19-08
 Date Analyzed: 3-19-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-105-04
 Client ID: DUP-1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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Lab ID: 03-105-04
 Client ID: DUP-1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	0.31		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	0.28		0.20
m,p-Xylene	0.75		0.40
o-Xylene	0.29		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	71-126
Toluene-d8	85	76-116
4-Bromofluorobenzene	76	70-123

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Date Extracted: 3-19-08

Date Analyzed: 3-19-08

Matrix: Water

Units: ug/L (ppb)

Lab ID: 03-105-05

Client ID: Field blank_3

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	1.2		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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 Samples Submitted: March 14, 2008
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Lab ID: 03-105-05
 Client ID: Field blank_3

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	71-126
Toluene-d8	84	76-116
4-Bromofluorobenzene	76	70-123

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VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

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Date Extracted: 3-19-08
 Date Analyzed: 3-19-08

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: MB0319W1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

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Lab ID: MB0319W1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	71-126
Toluene-d8	83	76-116
4-Bromofluorobenzene	76	70-123

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**VOLATILES by EPA 8260B
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-19-08
 Date Analyzed: 3-19-08

 Matrix: Water
 Units: ug/L (ppb)

Lab ID: SB0319W1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	8.91	89	8.16	82	70-130	
Benzene	10.0	9.55	96	9.55	96	70-130	
Trichloroethene	10.0	8.45	85	8.29	83	70-116	
Toluene	10.0	9.80	98	9.62	96	76-119	
Chlorobenzene	10.0	9.12	91	9.16	92	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	9	20	
Benzene	0	16	
Trichloroethene	2	16	
Toluene	2	15	
Chlorobenzene	0	15	

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
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Date Extracted: 3-17-08
 Date Analyzed: 3-18&20-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-105-01
 Client ID: **MW-1**

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		1.0
Pyridine	ND		1.0
Phenol	ND		1.0
Aniline	ND		1.0
bis(2-Chloroethyl)ether	ND		1.0
2-Chlorophenol	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
Benzyl alcohol	ND		1.0
1,2-Dichlorobenzene	ND		1.0
2-Methylphenol (o-Cresol)	ND		1.0
bis(2-Chloroisopropyl)ether	ND		1.0
(3+4)-Methylphenol (m,p-Cresol)	ND		1.0
N-Nitroso-di-n-propylamine	ND		1.0
Hexachloroethane	ND		1.0
Nitrobenzene	ND		1.0
Isophorone	ND		1.0
2-Nitrophenol	ND		1.0
2,4-Dimethylphenol	ND		1.0
bis(2-Chloroethoxy)methane	ND		1.0
2,4-Dichlorophenol	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
Naphthalene	ND		0.10
4-Chloroaniline	ND		1.0
Hexachlorobutadiene	ND		1.0
4-Chloro-3-methylphenol	ND		1.0
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10

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 Samples Submitted: March 14, 2008
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Lab ID: 03-105-01
 Client ID: MW-1

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		1.0
2,4,6-Trichlorophenol	ND		1.0
2,3-Dichloroaniline	ND		1.0
2,4,5-Trichlorophenol	ND		1.0
2-Chloronaphthalene	ND		1.0
2-Nitroaniline	ND		1.0
1,4-Dinitrobenzene	ND		1.0
Dimethylphthalate	ND		1.0
1,3-Dinitrobenzene	ND		1.0
2,6-Dinitrotoluene	ND		1.0
1,2-Dinitrobenzene	ND		1.0
Acenaphthylene	ND		0.10
3-Nitroaniline	ND		1.0
2,4-Dinitrophenol	ND		5.2
Acenaphthene	ND		0.10
4-Nitrophenol	ND		1.0
2,4-Dinitrotoluene	ND		1.0
Dibenzofuran	ND		1.0
2,3,4,6-Tetrachlorophenol	ND		1.0
2,3,5,6-Tetrachlorophenol	ND		1.0
Diethylphthalate	ND		1.0
4-Chlorophenyl-phenylether	ND		1.0
4-Nitroaniline	ND		1.0
Fluorene	ND		0.10
4,6-Dinitro-2-methylphenol	ND		5.2
N-Nitrosodiphenylamine	ND		1.0
1,2-Diphenylhydrazine	ND		1.0
4-Bromophenyl-phenylether	ND		1.0
Hexachlorobenzene	ND		1.0
Pentachlorophenol	ND		5.2
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Carbazole	ND		1.0
Di-n-butylphthalate	2.2		1.0
Fluoranthene	ND		0.10

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Lab ID: 03-105-01
 Client ID: MW-1

Compound:	Results	Flags	PQL
Benidine	ND		10
Pyrene	ND		0.10
Butylbenzylphthalate	ND		1.0
bis-2-Ethylhexyladipate	ND		1.0
3,3'-Dichlorobenzidine	ND		1.0
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
bis(2-Ethylhexyl)phthalate	ND		1.0
Di-n-octylphthalate	ND		1.0
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno[1,2,3-cd]pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	54	10 - 90
Phenol-d6	46	35 - 100
Nitrobenzene-d5	86	30 - 100
2-Fluorobiphenyl	93	39 - 100
2,4,6-Tribromophenol	102	50 - 105
Terphenyl-d14	109	49 - 115

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Date Extracted: 3-17-08
 Date Analyzed: 3-18&20-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-105-02
 Client ID: MW-2

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.98
Pyridine	ND		0.98
Phenol	ND		0.98
Aniline	ND		0.98
bis(2-Chloroethyl)ether	ND		0.98
2-Chlorophenol	ND		0.98
1,3-Dichlorobenzene	ND		0.98
1,4-Dichlorobenzene	ND		0.98
Benzyl alcohol	ND		0.98
1,2-Dichlorobenzene	ND		0.98
2-Methylphenol (o-Cresol)	ND		0.98
bis(2-Chloroisopropyl)ether	ND		0.98
(3+4)-Methylphenol (m,p-Cresol)	ND		0.98
N-Nitroso-di-n-propylamine	ND		0.98
Hexachloroethane	ND		0.98
Nitrobenzene	ND		0.98
Isophorone	ND		0.98
2-Nitrophenol	ND		0.98
2,4-Dimethylphenol	ND		0.98
bis(2-Chloroethoxy)methane	ND		0.98
2,4-Dichlorophenol	ND		0.98
1,2,4-Trichlorobenzene	ND		0.98
Naphthalene	ND		0.098
4-Chloroaniline	ND		0.98
Hexachlorobutadiene	ND		0.98
4-Chloro-3-methylphenol	ND		0.98
2-Methylnaphthalene	ND		0.098
1-Methylnaphthalene	ND		0.098

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
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Lab ID: 03-105-02
 Client ID: MW-2

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.98
2,4,6-Trichlorophenol	ND		0.98
2,3-Dichloroaniline	ND		0.98
2,4,5-Trichlorophenol	ND		0.98
2-Chloronaphthalene	ND		0.98
2-Nitroaniline	ND		0.98
1,4-Dinitrobenzene	ND		0.98
Dimethylphthalate	ND		0.98
1,3-Dinitrobenzene	ND		0.98
2,6-Dinitrotoluene	ND		0.98
1,2-Dinitrobenzene	ND		0.98
Acenaphthylene	ND		0.098
3-Nitroaniline	ND		0.98
2,4-Dinitrophenol	ND		4.9
Acenaphthene	ND		0.098
4-Nitrophenol	ND		0.98
2,4-Dinitrotoluene	ND		0.98
Dibenzofuran	ND		0.98
2,3,4,6-Tetrachlorophenol	ND		0.98
2,3,5,6-Tetrachlorophenol	ND		0.98
Diethylphthalate	ND		0.98
4-Chlorophenyl-phenylether	ND		0.98
4-Nitroaniline	ND		0.98
Fluorene	ND		0.098
4,6-Dinitro-2-methylphenol	ND		4.9
N-Nitrosodiphenylamine	ND		0.98
1,2-Diphenylhydrazine	ND		0.98
4-Bromophenyl-phenylether	ND		0.98
Hexachlorobenzene	ND		0.98
Pentachlorophenol	ND		4.9
Phenanthrene	ND		0.098
Anthracene	ND		0.098
Carbazole	ND		0.98
Di-n-butylphthalate	ND		0.98
Fluoranthene	ND		0.098

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Lab ID: 03-105-02
 Client ID: MW-2

Compound:	Results	Flags	PQL
Benidine	ND		9.8
Pyrene	0.17		0.098
Butylbenzylphthalate	ND		0.98
bis-2-Ethylhexyladipate	ND		0.98
3,3'-Dichlorobenzidine	ND		0.98
Benzo[a]anthracene	ND		0.0098
Chrysene	ND		0.0098
bis(2-Ethylhexyl)phthalate	ND		0.98
Di-n-octylphthalate	ND		0.98
Benzo[b]fluoranthene	ND		0.0098
Benzo[k]fluoranthene	ND		0.0098
Benzo[a]pyrene	ND		0.0098
Indeno[1,2,3-cd]pyrene	ND		0.0098
Dibenz[a,h]anthracene	ND		0.0098
Benzo[g,h,i]perylene	ND		0.0098

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	49	10 - 90
Phenol-d6	45	35 - 100
Nitrobenzene-d5	80	30 - 100
2-Fluorobiphenyl	92	39 - 100
2,4,6-Tribromophenol	103	50 - 105
Terphenyl-d14	114	49 - 115

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
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Date Extracted: 3-17-08
 Date Analyzed: 3-18&20-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-105-03
 Client ID: **MW-3**

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		1.1
Pyridine	ND		1.1
Phenol	ND		1.1
Aniline	ND		1.1
bis(2-Chloroethyl)ether	ND		1.1
2-Chlorophenol	ND		1.1
1,3-Dichlorobenzene	ND		1.1
1,4-Dichlorobenzene	ND		1.1
Benzyl alcohol	ND		1.1
1,2-Dichlorobenzene	ND		1.1
2-Methylphenol (o-Cresol)	ND		1.1
bis(2-Chloroisopropyl)ether	ND		1.1
(3+4)-Methylphenol (m,p-Cresol)	ND		1.1
N-Nitroso-di-n-propylamine	ND		1.1
Hexachloroethane	ND		1.1
Nitrobenzene	ND		1.1
Isophorone	ND		1.1
2-Nitrophenol	ND		1.1
2,4-Dimethylphenol	ND		1.1
bis(2-Chloroethoxy)methane	ND		1.1
2,4-Dichlorophenol	ND		1.1
1,2,4-Trichlorobenzene	ND		1.1
Naphthalene	ND		0.11
4-Chloroaniline	ND		1.1
Hexachlorobutadiene	ND		1.1
4-Chloro-3-methylphenol	ND		1.1
2-Methylnaphthalene	ND		0.11
1-Methylnaphthalene	ND		0.11

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
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Lab ID: 03-105-03
 Client ID: MW-3

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		1.1
2,4,6-Trichlorophenol	ND		1.1
2,3-Dichloroaniline	ND		1.1
2,4,5-Trichlorophenol	ND		1.1
2-Chloronaphthalene	ND		1.1
2-Nitroaniline	ND		1.1
1,4-Dinitrobenzene	ND		1.1
Dimethylphthalate	ND		1.1
1,3-Dinitrobenzene	ND		1.1
2,6-Dinitrotoluene	ND		1.1
1,2-Dinitrobenzene	ND		1.1
Acenaphthylene	ND		0.11
3-Nitroaniline	ND		1.1
2,4-Dinitrophenol	ND		5.4
Acenaphthene	ND		0.11
4-Nitrophenol	ND		1.1
2,4-Dinitrotoluene	ND		1.1
Dibenzofuran	ND		1.1
2,3,4,6-Tetrachlorophenol	ND		1.1
2,3,5,6-Tetrachlorophenol	ND		1.1
Diethylphthalate	ND		1.1
4-Chlorophenyl-phenylether	ND		1.1
4-Nitroaniline	ND		1.1
Fluorene	ND		0.11
4,6-Dinitro-2-methylphenol	ND		5.4
N-Nitrosodiphenylamine	ND		1.1
1,2-Diphenylhydrazine	ND		1.1
4-Bromophenyl-phenylether	ND		1.1
Hexachlorobenzene	ND		1.1
Pentachlorophenol	ND		5.4
Phenanthrene	ND		0.11
Anthracene	ND		0.11
Carbazole	ND		1.1
Di-n-butylphthalate	ND		1.1
Fluoranthene	ND		0.11

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-105-03
 Client ID: MW-3

Compound:	Results	Flags	PQL
Benidine	ND		11
Pyrene	ND		0.11
Butylbenzylphthalate	ND		1.1
bis-2-Ethylhexyladipate	ND		1.1
3,3'-Dichlorobenzidine	ND		1.1
Benzo[a]anthracene	ND		0.011
Chrysene	ND		0.011
bis(2-Ethylhexyl)phthalate	ND		1.1
Di-n-octylphthalate	ND		1.1
Benzo[b]fluoranthene	ND		0.011
Benzo[k]fluoranthene	ND		0.011
Benzo[a]pyrene	ND		0.011
Indeno[1,2,3-cd]pyrene	ND		0.011
Dibenz[a,h]anthracene	ND		0.011
Benzo[g,h,i]perylene	ND		0.011

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	56	10 - 90
Phenol-d6	46	35 - 100
Nitrobenzene-d5	84	30 - 100
2-Fluorobiphenyl	83	39 - 100
2,4,6-Tribromophenol	99	50 - 105
Terphenyl-d14	110	49 - 115

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

SEMIVOLATILES by EPA 8270D/SIM

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Date Extracted: 3-17-08
 Date Analyzed: 3-18&20-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-105-04
 Client ID: **DUP-1**

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		1.1
Pyridine	ND		1.1
Phenol	ND		1.1
Aniline	ND		1.1
bis(2-Chloroethyl)ether	ND		1.1
2-Chlorophenol	ND		1.1
1,3-Dichlorobenzene	ND		1.1
1,4-Dichlorobenzene	ND		1.1
Benzyl alcohol	ND		1.1
1,2-Dichlorobenzene	ND		1.1
2-Methylphenol (o-Cresol)	ND		1.1
bis(2-Chloroisopropyl)ether	ND		1.1
(3+4)-Methylphenol (m,p-Cresol)	ND		1.1
N-Nitroso-di-n-propylamine	ND		1.1
Hexachloroethane	ND		1.1
Nitrobenzene	ND		1.1
Isophorone	ND		1.1
2-Nitrophenol	ND		1.1
2,4-Dimethylphenol	ND		1.1
bis(2-Chloroethoxy)methane	ND		1.1
2,4-Dichlorophenol	ND		1.1
1,2,4-Trichlorobenzene	ND		1.1
Naphthalene	ND		0.11
4-Chloroaniline	ND		1.1
Hexachlorobutadiene	ND		1.1
4-Chloro-3-methylphenol	ND		1.1
2-Methylnaphthalene	ND		0.11
1-Methylnaphthalene	ND		0.11

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
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SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-105-04
 Client ID: DUP-1

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		1.1
2,4,6-Trichlorophenol	ND		1.1
2,3-Dichloroaniline	ND		1.1
2,4,5-Trichlorophenol	ND		1.1
2-Chloronaphthalene	ND		1.1
2-Nitroaniline	ND		1.1
1,4-Dinitrobenzene	ND		1.1
Dimethylphthalate	ND		1.1
1,3-Dinitrobenzene	ND		1.1
2,6-Dinitrotoluene	ND		1.1
1,2-Dinitrobenzene	ND		1.1
Acenaphthylene	ND		0.11
3-Nitroaniline	ND		1.1
2,4-Dinitrophenol	ND		5.4
Acenaphthene	ND		0.11
4-Nitrophenol	ND		1.1
2,4-Dinitrotoluene	ND		1.1
Dibenzofuran	ND		1.1
2,3,4,6-Tetrachlorophenol	ND		1.1
2,3,5,6-Tetrachlorophenol	ND		1.1
Diethylphthalate	ND		1.1
4-Chlorophenyl-phenylether	ND		1.1
4-Nitroaniline	ND		1.1
Fluorene	ND		0.11
4,6-Dinitro-2-methylphenol	ND		5.4
N-Nitrosodiphenylamine	ND		1.1
1,2-Diphenylhydrazine	ND		1.1
4-Bromophenyl-phenylether	ND		1.1
Hexachlorobenzene	ND		1.1
Pentachlorophenol	ND		5.4
Phenanthrene	ND		0.11
Anthracene	ND		0.11
Carbazole	ND		1.1
Di-n-butylphthalate	2.3		1.1
Fluoranthene	ND		0.11

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
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Lab ID: 03-105-04
Client ID: DUP-1

Compound:	Results	Flags	PQL
Benzidine	ND		11
Pyrene	ND		0.11
Butylbenzylphthalate	ND		1.1
bis-2-Ethylhexyladipate	ND		1.1
3,3'-Dichlorobenzidine	ND		1.1
Benzo[a]anthracene	ND		0.011
Chrysene	ND		0.011
bis(2-Ethylhexyl)phthalate	ND		1.1
Di-n-octylphthalate	ND		1.1
Benzo[b]fluoranthene	ND		0.011
Benzo[k]fluoranthene	ND		0.011
Benzo[a]pyrene	ND		0.011
Indeno[1,2,3-cd]pyrene	ND		0.011
Dibenz[a,h]anthracene	ND		0.011
Benzo[g,h,i]perylene	ND		0.011

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	52	10 - 90
Phenol-d6	45	35 - 100
Nitrobenzene-d5	78	30 - 100
2-Fluorobiphenyl	87	39 - 100
2,4,6-Tribromophenol	104	50 - 105
Terphenyl-d14	113	49 - 115

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**SEMIVOLATILES by EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Date Extracted: 3-17-08
 Date Analyzed: 3-18&20-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: MB0317W1

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		1.0
Pyridine	ND		1.0
Phenol	ND		1.0
Aniline	ND		1.0
bis(2-Chloroethyl)ether	ND		1.0
2-Chlorophenol	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
Benzyl alcohol	ND		1.0
1,2-Dichlorobenzene	ND		1.0
2-Methylphenol (o-Cresol)	ND		1.0
bis(2-Chloroisopropyl)ether	ND		1.0
(3+4)-Methylphenol (m,p-Cresol)	ND		1.0
N-Nitroso-di-n-propylamine	ND		1.0
Hexachloroethane	ND		1.0
Nitrobenzene	ND		1.0
Isophorone	ND		1.0
2-Nitrophenol	ND		1.0
2,4-Dimethylphenol	ND		1.0
bis(2-Chloroethoxy)methane	ND		1.0
2,4-Dichlorophenol	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
Naphthalene	ND		0.10
4-Chloroaniline	ND		1.0
Hexachlorobutadiene	ND		1.0
4-Chloro-3-methylphenol	ND		1.0
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**SEMIVOLATILES by EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Lab ID: MB0317W1

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		1.0
2,4,6-Trichlorophenol	ND		1.0
2,3-Dichloroaniline	ND		1.0
2,4,5-Trichlorophenol	ND		1.0
2-Chloronaphthalene	ND		1.0
2-Nitroaniline	ND		1.0
1,4-Dinitrobenzene	ND		1.0
Dimethylphthalate	ND		1.0
1,3-Dinitrobenzene	ND		1.0
2,6-Dinitrotoluene	ND		1.0
1,2-Dinitrobenzene	ND		1.0
Acenaphthylene	ND		0.10
3-Nitroaniline	ND		1.0
2,4-Dinitrophenol	ND		5.0
Acenaphthene	ND		0.10
4-Nitrophenol	ND		1.0
2,4-Dinitrotoluene	ND		1.0
Dibenzofuran	ND		1.0
2,3,4,6-Tetrachlorophenol	ND		1.0
2,3,5,6-Tetrachlorophenol	ND		1.0
Diethylphthalate	ND		1.0
4-Chlorophenyl-phenylether	ND		1.0
4-Nitroaniline	ND		1.0
Fluorene	ND		0.10
4,6-Dinitro-2-methylphenol	ND		5.0
N-Nitrosodiphenylamine	ND		1.0
1,2-Diphenylhydrazine	ND		1.0
4-Bromophenyl-phenylether	ND		1.0
Hexachlorobenzene	ND		1.0
Pentachlorophenol	ND		5.0
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Carbazole	ND		1.0
Di-n-butylphthalate	ND		1.0
Fluoranthene	ND		0.10

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Lab ID: MB0317W1

Compound:	Results	Flags	PQL
Benzidine	ND		10
Pyrene	ND		0.10
Butylbenzylphthalate	ND		1.0
bis-2-Ethylhexyladipate	ND		1.0
3,3'-Dichlorobenzidine	ND		1.0
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
bis(2-Ethylhexyl)phthalate	ND		1.0
Di-n-octylphthalate	ND		1.0
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno[1,2,3-cd]pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	54	10 - 90
Phenol-d6	45	35 - 100
Nitrobenzene-d5	84	30 - 100
2-Fluorobiphenyl	86	39 - 100
2,4,6-Tribromophenol	92	50 - 105
Terphenyl-d14	110	49 - 115

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**SEMIVOLATILES by EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-17-08
 Date Analyzed: 3-18-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: SB0317W1

Compound:	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
Phenol	40.0	18.3	46	18.9	47	21-75	
2-Chlorophenol	40.0	31.0	77	33.3	83	43-96	
1,4-Dichlorobenzene	20.0	11.7	59	13.3	66	38-80	
N-Nitroso-di-n-propylamine	20.0	16.8	84	16.7	83	36-99	
1,2,4-Trichlorobenzene	20.0	11.7	58	12.2	61	39-85	
4-Chloro-3-methylphenol	40.0	36.8	92	36.2	91	50-105	
Acenaphthene	20.0	16.7	83	16.4	82	46-90	
2,4-Dinitrotoluene	20.0	20.1	100	19.5	98	50-122	
4-Nitrophenol	40.0	26.6	66	25.4	64	30-116	
Pentachlorophenol	40.0	36.7	92	36.4	91	40-112	
Pyrene	20.0	20.5	103	20.1	101	51-105	

	RPD	RPD Limits	Flags
Phenol	3	31	
2-Chlorophenol	7	29	
1,4-Dichlorobenzene	13	33	
N-Nitroso-di-n-propylamine	1	28	
1,2,4-Trichlorobenzene	4	32	
4-Chloro-3-methylphenol	2	23	
Acenaphthene	2	24	
2,4-Dinitrotoluene	3	30	
4-Nitrophenol	4	30	
Pentachlorophenol	1	30	
Pyrene	2	18	

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

PCBs by EPA 8082

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: MW-1						
Laboratory ID:	03-105-01					
Aroclor 1016	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1221	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1232	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1242	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1248	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1254	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1260	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1262	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1268	ND	0.050	EPA 8082	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCB	77	45-121				
Client ID: MW-2						
Laboratory ID:	03-105-02					
Aroclor 1016	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1221	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1232	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1242	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1248	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1254	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1260	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1262	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1268	ND	0.048	EPA 8082	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	45-121				
Client ID: MW-3						
Laboratory ID:	03-105-03					
Aroclor 1016	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1221	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1232	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1242	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1248	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1254	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1260	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1262	ND	0.048	EPA 8082	3-18-08	3-18-08	
Aroclor 1268	ND	0.048	EPA 8082	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	45-121				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

PCBs by EPA 8082

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DUP-1					
Laboratory ID:	03-105-04					
Aroclor 1016	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1221	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1232	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1242	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1248	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1254	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1260	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1262	ND	0.058	EPA 8082	3-18-08	3-18-08	
Aroclor 1268	ND	0.058	EPA 8082	3-18-08	3-18-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>89</i>	<i>45-121</i>				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**PCBs by EPA 8082
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0318W1					
Aroclor 1016	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1221	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1232	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1242	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1248	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1254	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1260	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1262	ND	0.050	EPA 8082	3-18-08	3-18-08	
Aroclor 1268	ND	0.050	EPA 8082	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	45-121				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
SPIKE BLANKS												
Laboratory ID:	SB0318W1											
	SB	SBD	SB	SBD		SB	SBD					
Aroclor 1260	0.471	0.471	0.500	0.500	N/A	94	94	57-115	0		12	
Surrogate:												
DCB						100	97	45-121				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-1					
Laboratory ID:	03-105-01					
alpha-BHC	ND	0.0056	EPA 8081	3-18-08	3-19-08	
gamma-BHC	ND	0.0056	EPA 8081	3-18-08	3-19-08	
beta-BHC	ND	0.0056	EPA 8081	3-18-08	3-19-08	
delta-BHC	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Heptachlor	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Aldrin	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Heptachlor Epoxide	ND	0.0056	EPA 8081	3-18-08	3-19-08	
gamma-Chlordane	ND	0.0056	EPA 8081	3-18-08	3-19-08	
alpha-Chlordane	ND	0.0056	EPA 8081	3-18-08	3-19-08	
4,4'-DDE	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Endosulfan I	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Dieldrin	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Endrin	ND	0.0056	EPA 8081	3-18-08	3-19-08	
4,4'-DDD	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Endosulfan II	ND	0.0056	EPA 8081	3-18-08	3-19-08	
4,4'-DDT	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Endrin Aldehyde	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Methoxychlor	ND	0.011	EPA 8081	3-18-08	3-19-08	
Endsulfan Sulfate	ND	0.0056	EPA 8081	3-18-08	3-19-08	
Endrin Ketone	ND	0.023	EPA 8081	3-18-08	3-19-08	
Toxaphene	ND	0.056	EPA 8081	3-18-08	3-19-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	61	30-105				
DCB	80	30-121				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-2					
Laboratory ID:	03-105-02					
alpha-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
gamma-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
beta-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
delta-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Heptachlor	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Aldrin	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Heptachlor Epoxide	ND	0.0050	EPA 8081	3-18-08	3-19-08	
gamma-Chlordane	ND	0.0050	EPA 8081	3-18-08	3-19-08	
alpha-Chlordane	ND	0.0050	EPA 8081	3-18-08	3-19-08	
4,4'-DDE	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endosulfan I	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Dieldrin	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endrin	ND	0.0050	EPA 8081	3-18-08	3-19-08	
4,4'-DDD	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endosulfan II	ND	0.0050	EPA 8081	3-18-08	3-19-08	
4,4'-DDT	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endrin Aldehyde	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Methoxychlor	ND	0.0099	EPA 8081	3-18-08	3-19-08	
Endsulfan Sulfate	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endrin Ketone	ND	0.020	EPA 8081	3-18-08	3-19-08	
Toxaphene	ND	0.050	EPA 8081	3-18-08	3-19-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	66	30-105				
DCB	77	30-121				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-3					
Laboratory ID:	03-105-03					
alpha-BHC	ND	0.0051	EPA 8081	3-18-08	3-19-08	
gamma-BHC	ND	0.0051	EPA 8081	3-18-08	3-19-08	
beta-BHC	ND	0.0051	EPA 8081	3-18-08	3-19-08	
delta-BHC	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Heptachlor	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Aldrin	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Heptachlor Epoxide	ND	0.0051	EPA 8081	3-18-08	3-19-08	
gamma-Chlordane	ND	0.0051	EPA 8081	3-18-08	3-19-08	
alpha-Chlordane	ND	0.0051	EPA 8081	3-18-08	3-19-08	
4,4'-DDE	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Endosulfan I	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Dieldrin	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Endrin	ND	0.0051	EPA 8081	3-18-08	3-19-08	
4,4'-DDD	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Endosulfan II	ND	0.0051	EPA 8081	3-18-08	3-19-08	
4,4'-DDT	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Endrin Aldehyde	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Methoxychlor	ND	0.010	EPA 8081	3-18-08	3-19-08	
Endsulfan Sulfate	ND	0.0051	EPA 8081	3-18-08	3-19-08	
Endrin Ketone	ND	0.020	EPA 8081	3-18-08	3-19-08	
Toxaphene	ND	0.051	EPA 8081	3-18-08	3-19-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	61	30-105				
DCB	73	30-121				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DUP-1					
Laboratory ID:	03-105-04					
alpha-BHC	ND	0.0048	EPA 8081	3-18-08	3-19-08	
gamma-BHC	ND	0.0048	EPA 8081	3-18-08	3-19-08	
beta-BHC	ND	0.0048	EPA 8081	3-18-08	3-19-08	
delta-BHC	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Heptachlor	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Aldrin	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Heptachlor Epoxide	ND	0.0048	EPA 8081	3-18-08	3-19-08	
gamma-Chlordane	ND	0.0048	EPA 8081	3-18-08	3-19-08	
alpha-Chlordane	ND	0.0048	EPA 8081	3-18-08	3-19-08	
4,4'-DDE	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Endosulfan I	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Dieldrin	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Endrin	ND	0.0048	EPA 8081	3-18-08	3-19-08	
4,4'-DDD	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Endosulfan II	ND	0.0048	EPA 8081	3-18-08	3-19-08	
4,4'-DDT	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Endrin Aldehyde	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Methoxychlor	ND	0.0096	EPA 8081	3-18-08	3-19-08	
Endsulfan Sulfate	ND	0.0048	EPA 8081	3-18-08	3-19-08	
Endrin Ketone	ND	0.019	EPA 8081	3-18-08	3-19-08	
Toxaphene	ND	0.048	EPA 8081	3-18-08	3-19-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	61	30-105				
DCB	85	30-121				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0318W1					
alpha-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
gamma-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
beta-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
delta-BHC	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Heptachlor	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Aldrin	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Heptachlor Epoxide	ND	0.0050	EPA 8081	3-18-08	3-19-08	
gamma-Chlordane	ND	0.0050	EPA 8081	3-18-08	3-19-08	
alpha-Chlordane	ND	0.0050	EPA 8081	3-18-08	3-19-08	
4,4'-DDE	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endosulfan I	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Dieldrin	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endrin	ND	0.0050	EPA 8081	3-18-08	3-19-08	
4,4'-DDD	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endosulfan II	ND	0.0050	EPA 8081	3-18-08	3-19-08	
4,4'-DDT	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endrin Aldehyde	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Methoxychlor	ND	0.010	EPA 8081	3-18-08	3-19-08	
Endsulfan Sulfate	ND	0.0050	EPA 8081	3-18-08	3-19-08	
Endrin Ketone	ND	0.020	EPA 8081	3-18-08	3-19-08	
Toxaphene	ND	0.050	EPA 8081	3-18-08	3-19-08	
Surrogate:	Percent Recovery	Control Limits				
TCMX	67	30-105				
DCB	87	30-121				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS								
Laboratory ID:	SB0318W1							
	SB	SBD	SB	SBD	SB	SBD		
gamma-BHC	0.0427	0.0421	0.0500	0.0500	N/A	85 84	50-104	1 20
Heptachlor	0.0360	0.0365	0.0500	0.0500	N/A	72 73	41-102	1 22
Aldrin	0.0355	0.0351	0.0500	0.0500	N/A	71 70	29-101	1 25
Dieldrin	0.101	0.100	0.125	0.125	N/A	81 80	55-110	1 24
Endrin	0.109	0.109	0.125	0.125	N/A	87 87	54-120	0 22
4,4'-DDT	0.104	0.106	0.125	0.125	N/A	83 85	56-119	2 26
Surrogate:								
TCMX					67 66	30-105		
DCB					79 79	30-121		

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**CHLORINATED ACID
 HERBICIDES by EPA 8151A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-1					
Laboratory ID:	03-105-01					
Dalapon	ND	0.23	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	0.023	EPA 8151	3-18-08	3-18-08	
MCPPE	ND	4.6	EPA 8151	3-18-08	3-18-08	
MCPA	ND	4.6	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	0.023	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	0.46	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	0.0094	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	0.023	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	0.023	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	0.023	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	0.023	EPA 8151	3-18-08	3-18-08	

<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>
DCAA	56	44-116

Client ID:	MW-2					
Laboratory ID:	03-105-02					
Dalapon	ND	0.22	EPA 8151	3-21-08	3-24-08	
Dicamba	ND	0.023	EPA 8151	3-21-08	3-24-08	
MCPPE	ND	4.6	EPA 8151	3-21-08	3-24-08	
MCPA	ND	4.6	EPA 8151	3-21-08	3-24-08	
Dichlorprop	ND	0.023	EPA 8151	3-21-08	3-24-08	
2,4-D	ND	0.46	EPA 8151	3-21-08	3-24-08	
Pentachlorophenol	ND	0.0093	EPA 8151	3-21-08	3-24-08	
2,4,5-TP (Silvex)	ND	0.023	EPA 8151	3-21-08	3-24-08	
2,4,5-T	ND	0.023	EPA 8151	3-21-08	3-24-08	
2,4-DB	ND	0.023	EPA 8151	3-21-08	3-24-08	
Dinoseb	ND	0.023	EPA 8151	3-21-08	3-24-08	

<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>
DCAA	76	44-116

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**CHLORINATED ACID
 HERBICIDES by EPA 8151A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		MW-3				
Laboratory ID:		03-105-03				
Dalapon	ND	0.22	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	0.023	EPA 8151	3-18-08	3-18-08	
MCPP	ND	4.5	EPA 8151	3-18-08	3-18-08	
MCPA	ND	4.5	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	0.023	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	0.45	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	0.0091	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	0.023	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	0.023	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	0.023	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	0.023	EPA 8151	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCAA	67	44-116				
Client ID:		DUP-1				
Laboratory ID:		03-105-04				
Dalapon	ND	0.23	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	0.024	EPA 8151	3-18-08	3-18-08	
MCPP	ND	4.7	EPA 8151	3-18-08	3-18-08	
MCPA	ND	4.7	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	0.024	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	0.47	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	0.0095	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	0.024	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	0.024	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	0.024	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	0.024	EPA 8151	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCAA	76	44-116				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**CHLORINATED ACID
 HERBICIDES by EPA 8151A
 METHOD BLANK QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0318W1						
Dalapon	ND	0.23	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	0.024	EPA 8151	3-18-08	3-18-08	
MCPPE	ND	4.7	EPA 8151	3-18-08	3-18-08	
MCPA	ND	4.7	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	0.024	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	0.47	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	0.0095	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	0.024	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	0.024	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	0.024	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	0.024	EPA 8151	3-18-08	3-18-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCAA	74	44-116				

Laboratory ID: MB0321W1						
Dalapon	ND	0.23	EPA 8151	3-21-08	3-24-08	
Dicamba	ND	0.024	EPA 8151	3-21-08	3-24-08	
MCPPE	ND	4.7	EPA 8151	3-21-08	3-24-08	
MCPA	ND	4.7	EPA 8151	3-21-08	3-24-08	
Dichlorprop	ND	0.024	EPA 8151	3-21-08	3-24-08	
2,4-D	ND	0.47	EPA 8151	3-21-08	3-24-08	
Pentachlorophenol	ND	0.0095	EPA 8151	3-21-08	3-24-08	
2,4,5-TP (Silvex)	ND	0.024	EPA 8151	3-21-08	3-24-08	
2,4,5-T	ND	0.024	EPA 8151	3-21-08	3-24-08	
2,4-DB	ND	0.024	EPA 8151	3-21-08	3-24-08	
Dinoseb	ND	0.024	EPA 8151	3-21-08	3-24-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCAA	72	44-116				

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**CHLORINATED ACID
 HERBICIDES by EPA 8151A
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

					Source	Percent	Recovery				
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	RPD	Limit	Flags
Laboratory ID:	SB0318W1										
	SB	SBD	SB	SBD		SB	SBD				
Dicamba	0.824	0.797	1.00	1.00	N/A	82	80	29-121	3	20	
2,4-D	0.797	0.786	1.00	1.00	N/A	80	79	47-110	1	20	
2,4,5-T	0.897	0.868	1.00	1.00	N/A	90	87	61-119	3	20	
2,4-DB	0.942	1.11	1.00	1.00	N/A	94	111	70-144	16	20	
Surrogate:											
DCAA						78	79	44-116			

Laboratory ID:	SB0321W1										
	SB	SBD	SB	SBD		SB	SBD				
Dicamba	0.615	0.654	1.00	1.00	N/A	61	65	29-121	6	20	
2,4-D	0.806	0.787	1.00	1.00	N/A	81	79	47-110	2	20	
2,4,5-T	0.912	0.902	1.00	1.00	N/A	91	90	61-119	1	20	
2,4-DB	0.971	0.950	1.00	1.00	N/A	97	95	70-144	2	20	
<i>Surrogate:</i>											
DCAA						75	78	44-116			

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

DISSOLVED METALS
EPA 200.8/7470A

Date Filtered: 3-17-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-105-01
Client ID: MW-1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.0
Barium	200.8	33	25
Cadmium	200.8	ND	4.0
Chromium	200.8	ND	10
Lead	200.8	ND	1.0
Mercury	7470A	ND	0.50
Selenium	200.8	ND	5.0
Silver	200.8	ND	10

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

DISSOLVED METALS
EPA 200.8/7470A

Date Filtered: 3-17-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-105-02
Client ID: MW-2

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.0
Barium	200.8	ND	25
Cadmium	200.8	ND	4.0
Chromium	200.8	ND	10
Lead	200.8	ND	1.0
Mercury	7470A	ND	0.50
Selenium	200.8	ND	5.0
Silver	200.8	ND	10

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

DISSOLVED METALS
EPA 200.8/7470A

Date Filtered: 3-17-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-105-03
Client ID: MW-3

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.0
Barium	200.8	36	25
Cadmium	200.8	ND	4.0
Chromium	200.8	ND	10
Lead	200.8	ND	1.0
Mercury	7470A	ND	0.50
Selenium	200.8	ND	5.0
Silver	200.8	ND	10

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

DISSOLVED METALS
EPA 200.8/7470A

Date Filtered: 3-17-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-105-04
Client ID: DUP-1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.0
Barium	200.8	31	25
Cadmium	200.8	ND	4.0
Chromium	200.8	ND	10
Lead	200.8	ND	1.0
Mercury	7470A	ND	0.50
Selenium	200.8	ND	5.0
Silver	200.8	ND	10

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

**DISSOLVED METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL**

Date Filtered: 3-17-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0317D1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.0
Barium	200.8	ND	25
Cadmium	200.8	ND	4.0
Chromium	200.8	ND	10
Lead	200.8	ND	1.0
Mercury	7470A	ND	0.50
Selenium	200.8	ND	5.0
Silver	200.8	ND	10

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-105
Project: 8-915-16341-0

**DISSOLVED METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL**

Date Filtered: 3-17-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-077-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.0	
Barium	33.5	32.1	4	25	
Cadmium	ND	ND	NA	4.0	
Chromium	ND	ND	NA	10	
Lead	ND	ND	NA	1.0	
Mercury	ND	ND	NA	0.50	
Selenium	ND	ND	NA	5.0	
Silver	ND	ND	NA	10	

Date of Report: March 26, 2008
 Samples Submitted: March 14, 2008
 Laboratory Reference: 0803-105
 Project: 8-915-16341-0

**DISSOLVED METALS
 EPA 200.8/7470A
 MS/MSD QUALITY CONTROL**

Date Filtered: 3-17-08
 Date Analyzed: 3-18&19-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-077-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	217	109	213	107	2	
Barium	200	231	99	234	100	1	
Cadmium	200	204	102	205	103	1	
Chromium	200	194	97	199	100	3	
Lead	200	197	99	196	98	1	
Mercury	12.5	12.4	99	12.4	99	0	
Selenium	200	223	112	219	110	2	
Silver	200	170	85	173	87	2	



Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference



Chain of Custody

OnSite
Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: AMEC Earth & Environmental
Project Number: 0-915-16341-0
Project Name: Spun Station Transfer Station
Project Manager: C. Incube
Sampled by: LMSICKEN CHOWARD

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☒ Standard (7 working days)
(TPH analysis 5 working days)

☐ (other)

Laboratory Number:

03-105

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-GxDTX	NWTPH-DX	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	MW-1	03.14.08		GW	16														
2	MW-2	1232			16														
3	MW-3	1350			16														
4	DUP-1				16														
5	Field blank-3	03.14.08	1534	W	5														
	trip blank			W															

Signature

Company

Date

Comments/Special Instructions:

Relinquished by	Signature	Company	Date	Time	Comments/Special Instructions:
Received by	Signature	AMEC	03.14.08	1740	Metals - Lab filtered upon arrival
Relinquished by	Signature	OS&E Inc.	03.14.08	1740	
Received by					
Relinquished by					
Received by					
Reviewed by/Date					Chromatograms with final report <input type="checkbox"/>

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 25, 2008

Cherilyn Inouye
AMEC Earth & Environmental, Inc.
5007 Pacific Highway East, Suite 5
Tacoma, WA 98424

Re: Analytical Data for Project 8915 162890
Laboratory Reference No. 0803-076

Dear Cherilyn:

Enclosed are the analytical results and associated quality control data for samples submitted on March 12, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', followed by a horizontal line.

David Baumeister
Project Manager

Enclosures

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

Case Narrative

Page 1 of 2

Samples were collected on March 11, 2008 and received by the laboratory on March 12, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Volatiles (soil) EPA 8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The results for Toluene in samples B-4_6, B-5_6 and B-5_7 may be the result of contaminated sample vials.

Interfering compounds in sample B-4_6 may be masking the presence of Acetone.

Internal Standard 1,4-Dichlorobenzene-d4 does not meet acceptance criteria and Surrogate Standard 4-Bromofluorobenzene is outside of the control limits for sample B-5_6 due to sample matrix effects. The sample was re-analyzed at a dilution with normal standard recoveries. All results, including Practical Quantitation Limits, from Bromobenzene onward should be considered estimates.

The values reported for Acetone in samples B-5_6 and B-5_7 exceed the quantitation range and are therefore estimates. The samples were re-analyzed at the lowest possible dilution allowed by Method 5035 with non-detect results for Acetone.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

Case Narrative

Page 2 of 2

Volatiles (water) EPA 8260B Analysis

Sample TRIP BLANK 2 was not analyzed for Vinyl Acetate.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Organochlorine Pesticides (soil) by EPA 8081A Analysis

Due to negative effects of the matrix on the instrument, values for the analytes 4,4'-DDT and Methoxychlor in the closing continuing calibration verification standard (CCV) were low. Therefore, values for these compounds can be greater than reported. Since the degradation of the CCV standards was reproducible after re-injecting the sample extracts, the CCV degradation problem was attributed to the matrix of these samples.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Gx

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	B-4_6	B-5_6
Lab ID:	03-076-02	03-076-05

	Result	Flags	PQL	Result	Flags	PQL
TPH-Gas	ND		4.6	ND		6.0
Surrogate Recovery: Fluorobenzene	89%			94%		

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Gx

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **B-5_7**
Lab ID: 03-076-06

	Result	Flags	PQL
TPH-Gas	ND		5.1
Surrogate Recovery: Fluorobenzene	92%		

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Gx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0312S1

	Result	Flags	PQL
TPH-Gas	ND		5.0
Surrogate Recovery: Fluorobenzene	99%		

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Gx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-12-08

Date Analyzed: 3-12-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID:	03-062-01 Original	03-062-01 Duplicate	RPD	Flags
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	94%	94%		

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Gx

Date Extracted: 3-13-08
Date Analyzed: 3-13-08

Matrix: Water
Units: ug/L (ppb)

Client ID: **EB-1**
Lab ID: 03-076-13

	Result	Flags	PQL
TPH-Gas	ND		100
Surrogate Recovery: Fluorobenzene	106%		

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Gx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-13-08
Date Analyzed: 3-13-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0313W1

	Result	Flags	PQL
TPH-Gas	ND		100
Surrogate Recovery: Fluorobenzene	107%		

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Gx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-13-08
Date Analyzed: 3-13-08

Matrix: Water
Units: ug/L (ppb)

Lab ID:	03-076-13 Original	03-076-13 Duplicate	RPD	Flags
TPH-Gas	ND	ND	NA	
Surrogate Recovery: Fluorobenzene	106%	104%		

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

NWTPH-Dx

Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

Matrix: Soil
 Units: mg/kg (ppm)

Client ID:	B-4_6	B-5_6	B-5_7
Lab ID:	03-076-02	03-076-05	03-076-06
Diesel Range:	ND	ND	ND
PQL:	28	140	140
Identification:	---	---	---
Lube Oil Range:	110	2700	2400
PQL:	56	280	270
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	71%	79%	79%
Flags:	Y	Y	Y

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0312S1

Diesel Range: **ND**
PQL: 25
Identification: ---

Lube Oil Range: **ND**
PQL: 50
Identification: ---

Surrogate Recovery
o-Terphenyl: 88%

Flags: Y

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-062-01 03-062-01 DUP

Diesel Range: **ND** **ND**
PQL: 25 25

RPD: N/A

Surrogate Recovery
o-Terphenyl: 84% 75%

Flags: Y Y

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Dx

Date Extracted: 3-14-08
Date Analyzed: 3-14-08

Matrix: Water
Units: mg/L (ppm)

Client ID: **EB-1**
Lab ID: 03-076-13

Diesel Range: **ND**
PQL: 0.30
Identification: ---

Lube Oil Range: **ND**
PQL: 0.47
Identification: ---

Surrogate Recovery
o-Terphenyl: 82%

Flags: Y

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-14-08
Date Analyzed: 3-14-08

Matrix: Water
Units: mg/L (ppm)

Lab ID: MB0314W1

Diesel Range: **ND**
PQL: 0.25
Identification: ---

Lube Oil Range: **ND**
PQL: 0.40
Identification: ---

Surrogate Recovery
o-Terphenyl: 76%

Flags: Y

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-14-08
Date Analyzed: 3-18-08

Matrix: Water
Units: mg/L (ppm)

Lab ID: 03-092-01 03-092-01 DUP

Diesel Range: **ND** **ND**
PQL: 0.26 0.25

RPD: N/A

Surrogate Recovery
o-Terphenyl: 82% 81%

Flags: Y Y

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 3-14-08
 Date Analyzed: 3-14-08

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: 03-076-02
Client ID: B-4_6

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00095
Chloromethane	ND		0.0047
Vinyl Chloride	ND		0.00095
Bromomethane	ND		0.00095
Chloroethane	ND		0.0047
Trichlorofluoromethane	ND		0.00095
1,1-Dichloroethene	ND		0.00095
Acetone	ND		0.0047
Iodomethane	ND		0.0047
Carbon Disulfide	ND		0.00095
Methylene Chloride	ND		0.0047
(trans) 1,2-Dichloroethene	ND		0.00095
Methyl t-Butyl Ether	ND		0.00095
1,1-Dichloroethane	ND		0.00095
Vinyl Acetate	ND		0.0047
2,2-Dichloropropane	ND		0.00095
(cis) 1,2-Dichloroethene	ND		0.00095
2-Butanone	ND		0.0047
Bromochloromethane	ND		0.00095
Chloroform	ND		0.00095
1,1,1-Trichloroethane	ND		0.00095
Carbon Tetrachloride	ND		0.00095
1,1-Dichloropropene	ND		0.00095
Benzene	ND		0.00095
1,2-Dichloroethane	ND		0.00095
Trichloroethene	ND		0.00095
1,2-Dichloropropane	ND		0.00095
Dibromomethane	ND		0.00095
Bromodichloromethane	ND		0.00095
2-Chloroethyl Vinyl Ether	ND		0.0047
(cis) 1,3-Dichloropropene	ND		0.00095
Methyl Isobutyl Ketone	ND		0.0047
Toluene	0.0029	Z	0.00095
(trans) 1,3-Dichloropropene	ND		0.00095

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 03-076-02
 Client ID: B-4_6

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00095
Tetrachloroethene	ND		0.00095
1,3-Dichloropropane	ND		0.00095
2-Hexanone	ND		0.0047
Dibromochloromethane	ND		0.00095
1,2-Dibromoethane	ND		0.00095
Chlorobenzene	ND		0.00095
1,1,1,2-Tetrachloroethane	ND		0.00095
Ethylbenzene	ND		0.00095
m,p-Xylene	ND		0.0019
o-Xylene	ND		0.00095
Styrene	ND		0.00095
Bromoform	ND		0.00095
Isopropylbenzene	ND		0.00095
Bromobenzene	ND		0.00095
1,1,2,2-Tetrachloroethane	ND		0.00095
1,2,3-Trichloropropane	ND		0.00095
n-Propylbenzene	ND		0.00095
2-Chlorotoluene	ND		0.00095
4-Chlorotoluene	ND		0.00095
1,3,5-Trimethylbenzene	ND		0.00095
tert-Butylbenzene	ND		0.00095
1,2,4-Trimethylbenzene	ND		0.00095
sec-Butylbenzene	ND		0.00095
1,3-Dichlorobenzene	ND		0.00095
p-Isopropyltoluene	ND		0.00095
1,4-Dichlorobenzene	ND		0.00095
1,2-Dichlorobenzene	ND		0.00095
n-Butylbenzene	ND		0.00095
1,2-Dibromo-3-chloropropane	ND		0.0047
1,2,4-Trichlorobenzene	ND		0.00095
Hexachlorobutadiene	ND		0.0047
Naphthalene	ND		0.00095
1,2,3-Trichlorobenzene	ND		0.00095

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	77	70-118
Toluene-d8	85	70-121
4-Bromofluorobenzene	86	70-130

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 3-14-08
 Date Analyzed: 3-14-08
 Matrix: Soil
 Units: mg/kg (ppm)
 Lab ID: 03-076-05
 Client ID: B-5_6

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0055
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0055
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	0.73	E	0.0055
Iodomethane	ND		0.0055
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0055
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0055
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0055
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0055
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0055
Toluene	0.0016	Z	0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 03-076-05
 Client ID: B-5_6

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	0.0053		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0055
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0022
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0055
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0055
Naphthalene	ND		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery		Control Limits
Dibromofluoromethane	81		70-118
Toluene-d8	81		70-121
4-Bromofluorobenzene	62	Q	70-130

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 3-14-08
 Date Analyzed: 3-14-08

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: 03-076-06
 Client ID: B-5_7

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0050
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0050
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Acetone	0.38	E	0.0050
Iodomethane	ND		0.0050
Carbon Disulfide	ND		0.0010
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
Methyl t-Butyl Ether	ND		0.0010
1,1-Dichloroethane	ND		0.0010
Vinyl Acetate	ND		0.0050
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
2-Butanone	ND		0.0050
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
Benzene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
Methyl Isobutyl Ketone	ND		0.0050
Toluene	0.0026	Z	0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Date of Report: March 25, 2008
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Lab ID: 03-076-06
 Client ID: B-5_7

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	0.0013		0.0010
1,3-Dichloropropane	ND		0.0010
2-Hexanone	ND		0.0050
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Ethylbenzene	ND		0.0010
m,p-Xylene	ND		0.0020
o-Xylene	ND		0.0010
Styrene	ND		0.0010
Bromoform	ND		0.0010
Isopropylbenzene	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
n-Propylbenzene	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3,5-Trimethylbenzene	ND		0.0010
tert-Butylbenzene	ND		0.0010
1,2,4-Trimethylbenzene	ND		0.0010
sec-Butylbenzene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
p-Isopropyltoluene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
n-Butylbenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
Naphthalene	ND		0.0010
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	81	70-118
Toluene-d8	88	70-121
4-Bromofluorobenzene	76	70-130

Date of Report: March 25, 2008
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METHOD BLANK QUALITY CONTROL

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Date Extracted: 3-14-08
 Date Analyzed: 3-14-08

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: MB0314S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0050
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0050
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Acetone	ND		0.0050
Iodomethane	ND		0.0050
Carbon Disulfide	ND		0.0010
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
Methyl t-Butyl Ether	ND		0.0010
1,1-Dichloroethane	ND		0.0010
Vinyl Acetate	ND		0.0050
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
2-Butanone	ND		0.0050
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
Benzene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
Methyl Isobutyl Ketone	ND		0.0050
Toluene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

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METHOD BLANK QUALITY CONTROL

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Lab ID: MB0314S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
2-Hexanone	ND		0.0050
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Ethylbenzene	ND		0.0010
m,p-Xylene	ND		0.0020
o-Xylene	ND		0.0010
Styrene	ND		0.0010
Bromoform	ND		0.0010
Isopropylbenzene	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
n-Propylbenzene	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3,5-Trimethylbenzene	ND		0.0010
tert-Butylbenzene	ND		0.0010
1,2,4-Trimethylbenzene	ND		0.0010
sec-Butylbenzene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
p-Isopropyltoluene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
n-Butylbenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
Naphthalene	ND		0.0010
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	70	70-118
Toluene-d8	91	70-121
4-Bromofluorobenzene	79	70-130

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**VOLATILES by EPA 8260B
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-14-08

Date Analyzed: 3-14-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: SB0314S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0373	75	0.0412	82	70-130	
Benzene	0.0500	0.0419	84	0.0422	84	70-127	
Trichloroethene	0.0500	0.0404	81	0.0449	90	73-117	
Toluene	0.0500	0.0410	82	0.0436	87	78-115	
Chlorobenzene	0.0500	0.0410	82	0.0418	84	80-117	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	10	10	
Benzene	1	11	
Trichloroethene	11	13	
Toluene	6	12	
Chlorobenzene	2	10	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

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Date Extracted: 3-19-08

Date Analyzed: 3-19-08

Matrix: Water

Units: ug/L (ppb)

Lab ID: 03-076-13

Client ID: EB-1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	2.5		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	1.7		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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Lab ID: 03-076-13
 Client ID: EB-1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	71-126
Toluene-d8	84	76-116
4-Bromofluorobenzene	76	70-123

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
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VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

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Date Extracted: 3-19-08
 Date Analyzed: 3-19-08

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: MB0319W1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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METHOD BLANK QUALITY CONTROL

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Lab ID: MB0319W1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	71-126
Toluene-d8	83	76-116
4-Bromofluorobenzene	76	70-123

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
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 Project: 8915 162890

**VOLATILES by EPA 8260B
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-19-08
 Date Analyzed: 3-19-08

 Matrix: Water
 Units: ug/L (ppb)

Lab ID: SB0319W1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	8.91	89	8.16	82	70-130	
Benzene	10.0	9.55	96	9.55	96	70-130	
Trichloroethene	10.0	8.45	85	8.29	83	70-116	
Toluene	10.0	9.80	98	9.62	96	76-119	
Chlorobenzene	10.0	9.12	91	9.16	92	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	9	20	
Benzene	0	16	
Trichloroethene	2	16	
Toluene	2	15	
Chlorobenzene	0	15	

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 Project: 8915 162890

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Date Extracted: 3-14-08

Date Analyzed: 3-14-08

Matrix: Water

Units: ug/L (ppb)

Lab ID: 03-076-11

Client ID: TRIP BLANK 2

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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Lab ID: 03-076-11
 Client ID: **TRIP BLANK 2**

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	92	71-126
Toluene-d8	86	76-116
4-Bromofluorobenzene	83	70-123

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
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VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

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Date Extracted: 3-14-08
 Date Analyzed: 3-14-08

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: MB0314W1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		1.0
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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METHOD BLANK QUALITY CONTROL

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Lab ID: MB0314W1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	71-126
Toluene-d8	85	76-116
4-Bromofluorobenzene	83	70-123

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**VOLATILES by EPA 8260B
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-14-08
 Date Analyzed: 3-14-08

 Matrix: Water
 Units: ug/L (ppb)

Lab ID: SB0314W1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	11.4	114	10.6	106	70-130	
Benzene	10.0	10.8	108	11.1	111	70-130	
Trichloroethene	10.0	9.33	93	9.55	96	70-116	
Toluene	10.0	10.4	104	10.6	106	76-119	
Chlorobenzene	10.0	9.42	94	9.73	97	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	8	20	
Benzene	2	16	
Trichloroethene	2	16	
Toluene	2	15	
Chlorobenzene	3	15	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM

page 1 of 3

Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-076-03

Client ID: B-4_8

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.037
Pyridine	ND		0.037
Phenol	ND		0.037
Aniline	ND		0.037
bis(2-Chloroethyl)ether	ND		0.037
2-Chlorophenol	ND		0.037
1,3-Dichlorobenzene	ND		0.037
1,4-Dichlorobenzene	ND		0.037
Benzyl alcohol	ND		0.037
1,2-Dichlorobenzene	ND		0.037
2-Methylphenol (o-Cresol)	ND		0.037
bis(2-Chloroisopropyl)ether	ND		0.037
(3+4)-Methylphenol (m,p-Cresol)	ND		0.037
N-Nitroso-di-n-propylamine	ND		0.037
Hexachloroethane	ND		0.037
Nitrobenzene	ND		0.037
Isophorone	ND		0.037
2-Nitrophenol	ND		0.037
2,4-Dimethylphenol	ND		0.037
bis(2-Chloroethoxy)methane	ND		0.037
2,4-Dichlorophenol	ND		0.037
1,2,4-Trichlorobenzene	ND		0.037
Naphthalene	ND		0.0073
4-Chloroaniline	ND		0.037
Hexachlorobutadiene	ND		0.037
4-Chloro-3-methylphenol	ND		0.037
2-Methylnaphthalene	ND		0.0073
1-Methylnaphthalene	ND		0.0073

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-03
 Client ID: B-4_8

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.037
2,4,6-Trichlorophenol	ND		0.037
2,3-Dichloroaniline	ND		0.037
2,4,5-Trichlorophenol	ND		0.037
2-Chloronaphthalene	ND		0.037
2-Nitroaniline	ND		0.037
1,4-Dinitrobenzene	ND		0.037
Dimethylphthalate	ND		0.037
1,3-Dinitrobenzene	ND		0.037
2,6-Dinitrotoluene	ND		0.037
1,2-Dinitrobenzene	ND		0.037
Acenaphthylene	ND		0.0073
3-Nitroaniline	ND		0.037
2,4-Dinitrophenol	ND		0.18
Acenaphthene	ND		0.0073
4-Nitrophenol	ND		0.037
2,4-Dinitrotoluene	ND		0.037
Dibenzofuran	ND		0.037
2,3,4,6-Tetrachlorophenol	ND		0.037
2,3,5,6-Tetrachlorophenol	ND		0.037
Diethylphthalate	ND		0.037
4-Chlorophenyl-phenylether	ND		0.037
4-Nitroaniline	ND		0.037
Fluorene	ND		0.0073
4,6-Dinitro-2-methylphenol	ND		0.18
N-Nitrosodiphenylamine	ND		0.037
1,2-Diphenylhydrazine	ND		0.037
4-Bromophenyl-phenylether	ND		0.037
Hexachlorobenzene	ND		0.037
Pentachlorophenol	ND		0.18
Phenanthrene	ND		0.0073
Anthracene	ND		0.0073
Carbazole	ND		0.037
Di-n-butylphthalate	ND		0.037
Fluoranthene	ND		0.0073

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-03
 Client ID: B-4_8

Compound:	Results	Flags	PQL
Benzidine	ND		0.37
Pyrene	ND		0.0073
Butylbenzylphthalate	ND		0.037
bis-2-Ethylhexyladipate	ND		0.037
3,3'-Dichlorobenzidine	ND		0.037
Benzo[a]anthracene	ND		0.0073
Chrysene	ND		0.0073
bis(2-Ethylhexyl)phthalate	ND		0.037
Di-n-octylphthalate	ND		0.037
Benzo[b]fluoranthene	ND		0.0073
Benzo[k]fluoranthene	ND		0.0073
Benzo[a]pyrene	ND		0.0073
Indeno[1,2,3-cd]pyrene	ND		0.0073
Dibenz[a,h]anthracene	ND		0.0073
Benzo[g,h,i]perylene	ND		0.0073

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	81	39 - 90
Phenol-d6	97	40 - 100
Nitrobenzene-d5	84	30 - 100
2-Fluorobiphenyl	84	41 - 100
2,4,6-Tribromophenol	96	53 - 105
Terphenyl-d14	105	49 - 115

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM

page 1 of 3

Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-076-07

Client ID: B-5_8

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.035
Pyridine	ND		0.035
Phenol	ND		0.035
Aniline	ND		0.035
bis(2-Chloroethyl)ether	ND		0.035
2-Chlorophenol	ND		0.035
1,3-Dichlorobenzene	ND		0.035
1,4-Dichlorobenzene	ND		0.035
Benzyl alcohol	ND		0.035
1,2-Dichlorobenzene	ND		0.035
2-Methylphenol (o-Cresol)	ND		0.035
bis(2-Chloroisopropyl)ether	ND		0.035
(3+4)-Methylphenol (m,p-Cresol)	ND		0.035
N-Nitroso-di-n-propylamine	ND		0.035
Hexachloroethane	ND		0.035
Nitrobenzene	ND		0.035
Isophorone	ND		0.035
2-Nitrophenol	ND		0.035
2,4-Dimethylphenol	ND		0.035
bis(2-Chloroethoxy)methane	ND		0.035
2,4-Dichlorophenol	ND		0.035
1,2,4-Trichlorobenzene	ND		0.035
Naphthalene	ND		0.0069
4-Chloroaniline	ND		0.035
Hexachlorobutadiene	ND		0.035
4-Chloro-3-methylphenol	ND		0.035
2-Methylnaphthalene	ND		0.0069
1-Methylnaphthalene	ND		0.0069

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-07
 Client ID: B-5_8

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.035
2,4,6-Trichlorophenol	ND		0.035
2,3-Dichloroaniline	ND		0.035
2,4,5-Trichlorophenol	ND		0.035
2-Chloronaphthalene	ND		0.035
2-Nitroaniline	ND		0.035
1,4-Dinitrobenzene	ND		0.035
Dimethylphthalate	ND		0.035
1,3-Dinitrobenzene	ND		0.035
2,6-Dinitrotoluene	ND		0.035
1,2-Dinitrobenzene	ND		0.035
Acenaphthylene	ND		0.0069
3-Nitroaniline	ND		0.035
2,4-Dinitrophenol	ND		0.17
Acenaphthene	ND		0.0069
4-Nitrophenol	ND		0.035
2,4-Dinitrotoluene	ND		0.035
Dibenzofuran	ND		0.035
2,3,4,6-Tetrachlorophenol	ND		0.035
2,3,5,6-Tetrachlorophenol	ND		0.035
Diethylphthalate	ND		0.035
4-Chlorophenyl-phenylether	ND		0.035
4-Nitroaniline	ND		0.035
Fluorene	ND		0.0069
4,6-Dinitro-2-methylphenol	ND		0.17
N-Nitrosodiphenylamine	ND		0.035
1,2-Diphenylhydrazine	ND		0.035
4-Bromophenyl-phenylether	ND		0.035
Hexachlorobenzene	ND		0.035
Pentachlorophenol	ND		0.17
Phenanthrene	ND		0.0069
Anthracene	ND		0.0069
Carbazole	ND		0.035
Di-n-butylphthalate	ND		0.035
Fluoranthene	ND		0.0069

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-07
Client ID: B-5_8

Compound:	Results	Flags	PQL
Benzidine	ND		0.35
Pyrene	ND		0.0069
Butylbenzylphthalate	ND		0.035
bis-2-Ethylhexyladipate	ND		0.035
3,3'-Dichlorobenzidine	ND		0.035
Benzo[a]anthracene	ND		0.0069
Chrysene	ND		0.0069
bis(2-Ethylhexyl)phthalate	ND		0.035
Di-n-octylphthalate	ND		0.035
Benzo[b]fluoranthene	ND		0.0069
Benzo[k]fluoranthene	ND		0.0069
Benzo[a]pyrene	ND		0.0069
Indeno[1,2,3-cd]pyrene	ND		0.0069
Dibenz[a,h]anthracene	ND		0.0069
Benzo[g,h,i]perylene	ND		0.0069

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	81	39 - 90
Phenol-d6	96	40 - 100
Nitrobenzene-d5	84	30 - 100
2-Fluorobiphenyl	86	41 - 100
2,4,6-Tribromophenol	93	53 - 105
Terphenyl-d14	107	49 - 115

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM

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Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-076-08

Client ID: B-5_9

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.035
Pyridine	ND		0.035
Phenol	ND		0.035
Aniline	ND		0.035
bis(2-Chloroethyl)ether	ND		0.035
2-Chlorophenol	ND		0.035
1,3-Dichlorobenzene	ND		0.035
1,4-Dichlorobenzene	ND		0.035
Benzyl alcohol	ND		0.035
1,2-Dichlorobenzene	ND		0.035
2-Methylphenol (o-Cresol)	ND		0.035
bis(2-Chloroisopropyl)ether	ND		0.035
(3+4)-Methylphenol (m,p-Cresol)	ND		0.035
N-Nitroso-di-n-propylamine	ND		0.035
Hexachloroethane	ND		0.035
Nitrobenzene	ND		0.035
Isophorone	ND		0.035
2-Nitrophenol	ND		0.035
2,4-Dimethylphenol	ND		0.035
bis(2-Chloroethoxy)methane	ND		0.035
2,4-Dichlorophenol	ND		0.035
1,2,4-Trichlorobenzene	ND		0.035
Naphthalene	ND		0.0069
4-Chloroaniline	ND		0.035
Hexachlorobutadiene	ND		0.035
4-Chloro-3-methylphenol	ND		0.035
2-Methylnaphthalene	ND		0.0069
1-Methylnaphthalene	ND		0.0069

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-08
 Client ID: B-5_9

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.035
2,4,6-Trichlorophenol	ND		0.035
2,3-Dichloroaniline	ND		0.035
2,4,5-Trichlorophenol	ND		0.035
2-Chloronaphthalene	ND		0.035
2-Nitroaniline	ND		0.035
1,4-Dinitrobenzene	ND		0.035
Dimethylphthalate	ND		0.035
1,3-Dinitrobenzene	ND		0.035
2,6-Dinitrotoluene	ND		0.035
1,2-Dinitrobenzene	ND		0.035
Acenaphthylene	ND		0.0069
3-Nitroaniline	ND		0.035
2,4-Dinitrophenol	ND		0.17
Acenaphthene	ND		0.0069
4-Nitrophenol	ND		0.035
2,4-Dinitrotoluene	ND		0.035
Dibenzofuran	ND		0.035
2,3,4,6-Tetrachlorophenol	ND		0.035
2,3,5,6-Tetrachlorophenol	ND		0.035
Diethylphthalate	ND		0.035
4-Chlorophenyl-phenylether	ND		0.035
4-Nitroaniline	ND		0.035
Fluorene	ND		0.0069
4,6-Dinitro-2-methylphenol	ND		0.17
N-Nitrosodiphenylamine	ND		0.035
1,2-Diphenylhydrazine	ND		0.035
4-Bromophenyl-phenylether	ND		0.035
Hexachlorobenzene	ND		0.035
Pentachlorophenol	ND		0.17
Phenanthrene	ND		0.0069
Anthracene	ND		0.0069
Carbazole	ND		0.035
Di-n-butylphthalate	0.037		0.035
Fluoranthene	ND		0.0069

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-08
 Client ID: B-5_9

Compound:	Results	Flags	PQL
Benzidine	ND		0.35
Pyrene	ND		0.0069
Butylbenzylphthalate	ND		0.035
bis-2-Ethylhexyladipate	ND		0.035
3,3'-Dichlorobenzidine	ND		0.035
Benzo[a]anthracene	ND		0.0069
Chrysene	ND		0.0069
bis(2-Ethylhexyl)phthalate	ND		0.035
Di-n-octylphthalate	ND		0.035
Benzo[b]fluoranthene	ND		0.0069
Benzo[k]fluoranthene	ND		0.0069
Benzo[a]pyrene	ND		0.0069
Indeno[1,2,3-cd]pyrene	ND		0.0069
Dibenz[a,h]anthracene	ND		0.0069
Benzo[g,h,i]perylene	ND		0.0069

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	82	39 - 90
Phenol-d6	96	40 - 100
Nitrobenzene-d5	86	30 - 100
2-Fluorobiphenyl	91	41 - 100
2,4,6-Tribromophenol	98	53 - 105
Terphenyl-d14	115	49 - 115

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**SEMIVOLATILES by EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 1 of 3

Date Extracted: 3-12-08
 Date Analyzed: 3-12-08

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: MB0312S1

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		0.033
Pyridine	ND		0.033
Phenol	ND		0.033
Aniline	ND		0.033
bis(2-Chloroethyl)ether	ND		0.033
2-Chlorophenol	ND		0.033
1,3-Dichlorobenzene	ND		0.033
1,4-Dichlorobenzene	ND		0.033
Benzyl alcohol	ND		0.033
1,2-Dichlorobenzene	ND		0.033
2-Methylphenol (o-Cresol)	ND		0.033
bis(2-Chloroisopropyl)ether	ND		0.033
(3+4)-Methylphenol (m,p-Cresol)	ND		0.033
N-Nitroso-di-n-propylamine	ND		0.033
Hexachloroethane	ND		0.033
Nitrobenzene	ND		0.033
Isophorone	ND		0.033
2-Nitrophenol	ND		0.033
2,4-Dimethylphenol	ND		0.033
bis(2-Chloroethoxy)methane	ND		0.033
2,4-Dichlorophenol	ND		0.033
1,2,4-Trichlorobenzene	ND		0.033
Naphthalene	ND		0.0067
4-Chloroaniline	ND		0.033
Hexachlorobutadiene	ND		0.033
4-Chloro-3-methylphenol	ND		0.033
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
 page 2 of 3

Lab ID: MB0312S1

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.033
2,4,6-Trichlorophenol	ND		0.033
2,3-Dichloroaniline	ND		0.033
2,4,5-Trichlorophenol	ND		0.033
2-Chloronaphthalene	ND		0.033
2-Nitroaniline	ND		0.033
1,4-Dinitrobenzene	ND		0.033
Dimethylphthalate	ND		0.033
1,3-Dinitrobenzene	ND		0.033
2,6-Dinitrotoluene	ND		0.033
1,2-Dinitrobenzene	ND		0.033
Acenaphthylene	ND		0.0067
3-Nitroaniline	ND		0.033
2,4-Dinitrophenol	ND		0.17
Acenaphthene	ND		0.0067
4-Nitrophenol	ND		0.033
2,4-Dinitrotoluene	ND		0.033
Dibenzofuran	ND		0.033
2,3,4,6-Tetrachlorophenol	ND		0.033
2,3,5,6-Tetrachlorophenol	ND		0.033
Diethylphthalate	ND		0.033
4-Chlorophenyl-phenylether	ND		0.033
4-Nitroaniline	ND		0.033
Fluorene	ND		0.0067
4,6-Dinitro-2-methylphenol	ND		0.17
N-Nitrosodiphenylamine	ND		0.033
1,2-Diphenylhydrazine	ND		0.033
4-Bromophenyl-phenylether	ND		0.033
Hexachlorobenzene	ND		0.033
Pentachlorophenol	ND		0.17
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Carbazole	ND		0.033
Di-n-butylphthalate	ND		0.033
Fluoranthene	ND		0.0067

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
 page 3 of 3

Lab ID: MB0312S1

Compound:	Results	Flags	PQL
Benzidine	ND		0.33
Pyrene	ND		0.0067
Butylbenzylphthalate	ND		0.033
bis-2-Ethylhexyladipate	ND		0.033
3,3'-Dichlorobenzidine	ND		0.033
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
bis(2-Ethylhexyl)phthalate	ND		0.033
Di-n-octylphthalate	ND		0.033
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno[1,2,3-cd]pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	76	39 - 90
Phenol-d6	90	40 - 100
Nitrobenzene-d5	84	30 - 100
2-Fluorobiphenyl	87	41 - 100
2,4,6-Tribromophenol	90	53 - 105
Terphenyl-d14	103	49 - 115

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**SEMIVOLATILES by EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-12-08

Date Analyzed: 3-12-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: SB0312S1

Compound:	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
Phenol	1.33	1.12	84	0.993	75	36-97	
2-Chlorophenol	1.33	1.10	83	0.950	71	32-100	
1,4-Dichlorobenzene	0.667	0.450	67	0.382	57	24-94	
N-Nitroso-di-n-propylamine	0.667	0.567	85	0.483	72	34-99	
1,2,4-Trichlorobenzene	0.667	0.429	64	0.368	55	23-85	
4-Chloro-3-methylphenol	1.33	1.18	89	1.18	88	46-108	
Acenaphthene	0.667	0.527	79	0.499	75	37-101	
2,4-Dinitrotoluene	0.667	0.605	91	0.606	91	41-116	
4-Nitrophenol	1.33	1.44	108	1.50	113	48-116	
Pentachlorophenol	1.33	1.21	91	1.25	94	28-130	
Pyrene	0.667	0.631	95	0.649	97	46-117	

	RPD	RPD Limits	Flags
Phenol	12	29	
2-Chlorophenol	14	28	
1,4-Dichlorobenzene	16	27	
N-Nitroso-di-n-propylamine	16	30	
1,2,4-Trichlorobenzene	15	28	
4-Chloro-3-methylphenol	0	22	
Acenaphthene	6	25	
2,4-Dinitrotoluene	0	30	
4-Nitrophenol	4	30	
Pentachlorophenol	3	30	
Pyrene	3	20	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM

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Date Extracted: 3-13-08
 Date Analyzed: 3-17&18-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-076-13
 Client ID: EB-1

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		1.1
Pyridine	ND		1.1
Phenol	ND		1.1
Aniline	ND		1.1
bis(2-Chloroethyl)ether	ND		1.1
2-Chlorophenol	ND		1.1
1,3-Dichlorobenzene	ND		1.1
1,4-Dichlorobenzene	ND		1.1
Benzyl alcohol	ND		1.1
1,2-Dichlorobenzene	ND		1.1
2-Methylphenol (o-Cresol)	ND		1.1
bis(2-Chloroisopropyl)ether	ND		1.1
(3+4)-Methylphenol (m,p-Cresol)	ND		1.1
N-Nitroso-di-n-propylamine	ND		1.1
Hexachloroethane	ND		1.1
Nitrobenzene	ND		1.1
Isophorone	ND		1.1
2-Nitrophenol	ND		1.1
2,4-Dimethylphenol	ND		1.1
bis(2-Chloroethoxy)methane	ND		1.1
2,4-Dichlorophenol	ND		1.1
1,2,4-Trichlorobenzene	ND		1.1
Naphthalene	ND		0.11
4-Chloroaniline	ND		1.1
Hexachlorobutadiene	ND		1.1
4-Chloro-3-methylphenol	ND		1.1
2-Methylnaphthalene	ND		0.11
1-Methylnaphthalene	ND		0.11

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-13
 Client ID: EB-1

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		1.1
2,4,6-Trichlorophenol	ND		1.1
2,3-Dichloroaniline	ND		1.1
2,4,5-Trichlorophenol	ND		1.1
2-Chloronaphthalene	ND		1.1
2-Nitroaniline	ND		1.1
1,4-Dinitrobenzene	ND		1.1
Dimethylphthalate	ND		1.1
1,3-Dinitrobenzene	ND		1.1
2,6-Dinitrotoluene	ND		1.1
1,2-Dinitrobenzene	ND		1.1
Acenaphthylene	ND		0.11
3-Nitroaniline	ND		1.1
2,4-Dinitrophenol	ND		5.4
Acenaphthene	ND		0.11
4-Nitrophenol	ND		1.1
2,4-Dinitrotoluene	ND		1.1
Dibenzofuran	ND		1.1
2,3,4,6-Tetrachlorophenol	ND		1.1
2,3,5,6-Tetrachlorophenol	ND		1.1
Diethylphthalate	1.9		1.1
4-Chlorophenyl-phenylether	ND		1.1
4-Nitroaniline	ND		1.1
Fluorene	ND		0.11
4,6-Dinitro-2-methylphenol	ND		5.4
N-Nitrosodiphenylamine	ND		1.1
1,2-Diphenylhydrazine	ND		1.1
4-Bromophenyl-phenylether	ND		1.1
Hexachlorobenzene	ND		1.1
Pentachlorophenol	ND		5.4
Phenanthrene	ND		0.11
Anthracene	ND		0.11
Carbazole	ND		1.1
Di-n-butylphthalate	ND		1.1
Fluoranthene	ND		0.11

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
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Lab ID: 03-076-13
 Client ID: EB-1

Compound:	Results	Flags	PQL
Benidine	ND		11
Pyrene	ND		0.11
Butylbenzylphthalate	ND		1.1
bis-2-Ethylhexyladipate	ND		1.1
3,3'-Dichlorobenzidine	ND		1.1
Benzo[a]anthracene	ND		0.011
Chrysene	ND		0.011
bis(2-Ethylhexyl)phthalate	ND		1.1
Di-n-octylphthalate	ND		1.1
Benzo[b]fluoranthene	ND		0.011
Benzo[k]fluoranthene	ND		0.011
Benzo[a]pyrene	ND		0.011
Indeno[1,2,3-cd]pyrene	ND		0.011
Dibenz[a,h]anthracene	ND		0.011
Benzo[g,h,i]perylene	ND		0.011

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	48	10 - 90
Phenol-d6	37	35 - 100
Nitrobenzene-d5	67	30 - 100
2-Fluorobiphenyl	68	39 - 100
2,4,6-Tribromophenol	82	50 - 105
Terphenyl-d14	107	49 - 115

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**SEMIVOLATILES by EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 1 of 3

Date Extracted: 3-13-08
 Date Analyzed: 3-17&18-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: MB0313W1

Compound:	Results	Flags	PQL
N-Nitrosodimethylamine	ND		1.0
Pyridine	ND		1.0
Phenol	ND		1.0
Aniline	ND		1.0
bis(2-Chloroethyl)ether	ND		1.0
2-Chlorophenol	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
Benzyl alcohol	ND		1.0
1,2-Dichlorobenzene	ND		1.0
2-Methylphenol (o-Cresol)	ND		1.0
bis(2-Chloroisopropyl)ether	ND		1.0
(3+4)-Methylphenol (m,p-Cresol)	ND		1.0
N-Nitroso-di-n-propylamine	ND		1.0
Hexachloroethane	ND		1.0
Nitrobenzene	ND		1.0
Isophorone	ND		1.0
2-Nitrophenol	ND		1.0
2,4-Dimethylphenol	ND		1.0
bis(2-Chloroethoxy)methane	ND		1.0
2,4-Dichlorophenol	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
Naphthalene	ND		0.10
4-Chloroaniline	ND		1.0
Hexachlorobutadiene	ND		1.0
4-Chloro-3-methylphenol	ND		1.0
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Lab ID: MB0313W1

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		1.0
2,4,6-Trichlorophenol	ND		1.0
2,3-Dichloroaniline	ND		1.0
2,4,5-Trichlorophenol	ND		1.0
2-Chloronaphthalene	ND		1.0
2-Nitroaniline	ND		1.0
1,4-Dinitrobenzene	ND		1.0
Dimethylphthalate	ND		1.0
1,3-Dinitrobenzene	ND		1.0
2,6-Dinitrotoluene	ND		1.0
1,2-Dinitrobenzene	ND		1.0
Acenaphthylene	ND		0.10
3-Nitroaniline	ND		1.0
2,4-Dinitrophenol	ND		5.0
Acenaphthene	ND		0.10
4-Nitrophenol	ND		1.0
2,4-Dinitrotoluene	ND		1.0
Dibenzofuran	ND		1.0
2,3,4,6-Tetrachlorophenol	ND		1.0
2,3,5,6-Tetrachlorophenol	ND		1.0
Diethylphthalate	ND		1.0
4-Chlorophenyl-phenylether	ND		1.0
4-Nitroaniline	ND		1.0
Fluorene	ND		0.10
4,6-Dinitro-2-methylphenol	ND		5.0
N-Nitrosodiphenylamine	ND		1.0
1,2-Diphenylhydrazine	ND		1.0
4-Bromophenyl-phenylether	ND		1.0
Hexachlorobenzene	ND		1.0
Pentachlorophenol	ND		5.0
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Carbazole	ND		1.0
Di-n-butylphthalate	ND		1.0
Fluoranthene	ND		0.10

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
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SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Lab ID: MB0313W1

Compound:	Results	Flags	PQL
Benzidine	ND		10
Pyrene	ND		0.10
Butylbenzylphthalate	ND		1.0
bis-2-Ethylhexyladipate	ND		1.0
3,3'-Dichlorobenzidine	ND		1.0
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
bis(2-Ethylhexyl)phthalate	ND		1.0
Di-n-octylphthalate	ND		1.0
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno[1,2,3-cd]pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	47	10 - 90
Phenol-d6	36	35 - 100
Nitrobenzene-d5	66	30 - 100
2-Fluorobiphenyl	65	39 - 100
2,4,6-Tribromophenol	76	50 - 105
Terphenyl-d14	97	49 - 115

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**SEMIVOLATILES by EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Date Extracted: 3-13-08
 Date Analyzed: 3-17-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: SB0313W1

Compound:	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
Phenol	40.0	19.9	50	20.9	52	21-75	
2-Chlorophenol	40.0	35.9	90	37.1	93	43-96	
1,4-Dichlorobenzene	20.0	14.3	72	15.7	78	38-80	
N-Nitroso-di-n-propylamine	20.0	17.4	87	18.2	91	36-99	
1,2,4-Trichlorobenzene	20.0	12.8	64	14.0	70	39-85	
4-Chloro-3-methylphenol	40.0	37.5	94	37.4	94	50-105	
Acenaphthene	20.0	16.0	80	16.3	82	46-90	
2,4-Dinitrotoluene	20.0	19.3	97	18.9	95	50-122	
4-Nitrophenol	40.0	25.8	64	25.7	64	30-116	
Pentachlorophenol	40.0	31.6	79	31.2	78	40-112	
Pyrene	20.0	20.1	100	19.6	98	51-105	

	RPD	RPD Limits	Flags
Phenol	5	31	
2-Chlorophenol	3	29	
1,4-Dichlorobenzene	9	33	
N-Nitroso-di-n-propylamine	4	28	
1,2,4-Trichlorobenzene	8	32	
4-Chloro-3-methylphenol	0	23	
Acenaphthene	2	24	
2,4-Dinitrotoluene	2	30	
4-Nitrophenol	1	30	
Pentachlorophenol	1	30	
Pyrene	2	18	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

PCBs by EPA 8082

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-4_3					
Laboratory ID:	03-076-01					
Aroclor 1016	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1221	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1232	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1242	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1248	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1254	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1260	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1262	ND	0.056	EPA 8082	3-12-08	3-12-08	
Aroclor 1268	ND	0.056	EPA 8082	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	94	39-118				
Client ID:	B-5_3					
Laboratory ID:	03-076-04					
Aroclor 1016	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1221	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1232	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1242	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1248	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1254	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1260	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1262	ND	0.054	EPA 8082	3-12-08	3-12-08	
Aroclor 1268	ND	0.054	EPA 8082	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	91	39-118				

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**PCBs by EPA 8082
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0312S1					
Aroclor 1016	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1221	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1232	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1242	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1248	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1254	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1260	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1262	ND	0.050	EPA 8082	3-12-08	3-12-08	
Aroclor 1268	ND	0.050	EPA 8082	3-12-08	3-12-08	
Surrogate:	Percent Recovery	Control Limits				
DCB	101	39-118				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-062-05										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.444	0.456	0.500	0.500	ND	89	91	35-120	3	17	
Surrogate:											
DCB						93	92	39-118			

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**ORGANOCHLORINE
PESTICIDES by EPA 8081A**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-4_3					
Laboratory ID:	03-076-01					
alpha-BHC	ND	5.6	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	5.6	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	5.6	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	5.6	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	5.6	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	5.6	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	5.6	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	11	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	11	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	5.6	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	11	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	11	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	11	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	11	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	56	EPA 8081	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>TCMX</i>	<i>74</i>	<i>36-108</i>				
<i>DCB</i>	<i>63</i>	<i>30-115</i>				

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-5_3					
Laboratory ID:	03-076-04					
alpha-BHC	ND	5.4	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	5.4	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	5.4	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	5.4	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	5.4	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	5.4	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	5.4	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	11	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	11	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	5.4	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	11	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	11	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	11	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	11	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	11	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	11	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	54	EPA 8081	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	76	36-108				
DCB	76	30-115				

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A
 QUALITY CONTROL**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0312S1					
alpha-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	5.0	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	5.0	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	5.0	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	5.0	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	10	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	10	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	5.0	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	10	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	10	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	10	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	10	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	10	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	10	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	50	EPA 8081	3-12-08	3-12-08	
Surrogate:	Percent Recovery	Control Limits				
TCMX	82	36-108				
DCB	77	30-115				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES								
Laboratory ID:	03-062-05							
	MS	MSD	MS	MSD	MS	MSD		
gamma-BHC	41.8	39.3	50.0	50.0	ND	84 79	39-106	6 12
Heptachlor	39.3	37.3	50.0	50.0	ND	79 75	33-107	5 13
Aldrin	39.2	37.4	50.0	50.0	ND	78 75	36-101	5 12
Dieldrin	98.1	93.0	125	125	ND	78 74	33-115	5 11
Endrin	99.4	94.8	125	125	ND	80 76	35-108	5 11
4,4'-DDT	98.4	94.3	125	125	ND	79 75	24-122	4 17
Surrogate:								
TCMX					74	71	36-108	
DCB					72	70	30-115	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	EB-1					
Laboratory ID:	03-076-13					
alpha-BHC	ND	0.0052	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	0.0052	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	0.0052	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	0.0052	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	0.0052	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	0.0052	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Endrin	ND	0.0052	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	0.0052	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	0.010	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	0.0052	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	0.021	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	0.052	EPA 8081	3-12-08	3-12-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
TCMX	63	30-105				
DCB	84	30-121				

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**ORGANOCHLORINE
 PESTICIDES by EPA 8081A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0312W1						
alpha-BHC	ND	0.0050	EPA 8081	3-12-08	3-12-08	
gamma-BHC	ND	0.0050	EPA 8081	3-12-08	3-12-08	
beta-BHC	ND	0.0050	EPA 8081	3-12-08	3-12-08	
delta-BHC	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Heptachlor	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Aldrin	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Heptachlor Epoxide	ND	0.0050	EPA 8081	3-12-08	3-12-08	
gamma-Chlordane	ND	0.0050	EPA 8081	3-12-08	3-12-08	
alpha-Chlordane	ND	0.0050	EPA 8081	3-12-08	3-12-08	
4,4'-DDE	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Endosulfan I	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Dieldrin	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Endrin	ND	0.0050	EPA 8081	3-12-08	3-12-08	
4,4'-DDD	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Endosulfan II	ND	0.0050	EPA 8081	3-12-08	3-12-08	
4,4'-DDT	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Endrin Aldehyde	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Methoxychlor	ND	0.010	EPA 8081	3-12-08	3-12-08	
Endsulfan Sulfate	ND	0.0050	EPA 8081	3-12-08	3-12-08	
Endrin Ketone	ND	0.020	EPA 8081	3-12-08	3-12-08	
Toxaphene	ND	0.050	EPA 8081	3-12-08	3-12-08	
Surrogate:	Percent Recovery	Control Limits				
TCMX	60	30-105				
DCB	88	30-121				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
Laboratory ID: SB0312W1								
	SB	SBD	SB	SBD	SB	SBD		
gamma-BHC	0.0374	0.0393	0.0500	0.0500	N/A	75	79	50-104 5 20
Heptachlor	0.0333	0.0347	0.0500	0.0500	N/A	67	69	41-102 4 22
Aldrin	0.0331	0.0337	0.0500	0.0500	N/A	66	67	29-101 2 25
Dieldrin	0.102	0.104	0.125	0.125	N/A	81	83	55-110 2 24
Endrin	0.109	0.111	0.125	0.125	N/A	87	89	54-120 2 22
4,4'-DDT	0.111	0.109	0.125	0.125	N/A	88	87	56-119 2 26
Surrogate:								
TCMX					58	58	30-105	
DCB					82	82	30-121	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**CHLORINATED ACID
 HERBICIDES by EPA 8151A**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: B-4_3						
Laboratory ID: 03-076-01						
Dalapon	ND	260	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	53	EPA 8151	3-18-08	3-18-08	
MCP	ND	5300	EPA 8151	3-18-08	3-18-08	
MCPA	ND	5300	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	53	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	53	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	1.1	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	53	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	53	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	53	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	53	EPA 8151	3-18-08	3-18-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCAA	74	37-114				
Client ID: B-5_3						
Laboratory ID: 03-076-04						
Dalapon	ND	250	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	51	EPA 8151	3-18-08	3-18-08	
MCP	ND	5000	EPA 8151	3-18-08	3-18-08	
MCPA	ND	5000	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	51	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	51	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	1.0	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	51	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	51	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	51	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	51	EPA 8151	3-18-08	3-18-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCAA	79	37-114				

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**CHLORINATED ACID
 HERBICIDES by EPA 8151A
 QUALITY CONTROL**

Matrix: Soil
 Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0318S1					
Dalapon	ND	230	EPA 8151	3-18-08	3-18-08	
Dicamba	ND	47	EPA 8151	3-18-08	3-18-08	
MCPPE	ND	4700	EPA 8151	3-18-08	3-18-08	
MCPA	ND	4700	EPA 8151	3-18-08	3-18-08	
Dichlorprop	ND	47	EPA 8151	3-18-08	3-18-08	
2,4-D	ND	47	EPA 8151	3-18-08	3-18-08	
Pentachlorophenol	ND	0.95	EPA 8151	3-18-08	3-18-08	
2,4,5-TP (Silvex)	ND	48	EPA 8151	3-18-08	3-18-08	
2,4,5-T	ND	47	EPA 8151	3-18-08	3-18-08	
2,4-DB	ND	47	EPA 8151	3-18-08	3-18-08	
Dinoseb	ND	47	EPA 8151	3-18-08	3-18-08	
Surrogate:	Percent Recovery	Control Limits				
DCAA	70	37-114				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-062-05										
	MS	MSD	MS	MSD		MS	MSD				
Dicamba	77.7	76.9	100	100	ND	78	77	62-99	1	10	
2,4-D	71.5	69.1	100	100	ND	72	69	23-111	3	24	
2,4,5-T	79.5	75.5	100	100	ND	79	76	38-120	5	12	
2,4-DB	90.3	83.9	100	100	ND	90	84	44-135	7	16	
Surrogate:											
DCAA						80	79	37-114			

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**CHLORINATED ACID
 HERBICIDES by EPA 8151A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	EB-1					
Laboratory ID:	03-076-13					
Dalapon	ND	0.23	EPA 8151	3-13-08	3-14-08	
Dicamba	ND	0.024	EPA 8151	3-13-08	3-14-08	
MCPPE	ND	4.8	EPA 8151	3-13-08	3-14-08	
MCPA	ND	4.8	EPA 8151	3-13-08	3-14-08	
Dichlorprop	ND	0.024	EPA 8151	3-13-08	3-14-08	
2,4-D	ND	0.48	EPA 8151	3-13-08	3-14-08	
Pentachlorophenol	ND	0.0097	EPA 8151	3-13-08	3-14-08	
2,4,5-TP (Silvex)	ND	0.024	EPA 8151	3-13-08	3-14-08	
2,4,5-T	ND	0.024	EPA 8151	3-13-08	3-14-08	
2,4-DB	ND	0.024	EPA 8151	3-13-08	3-14-08	
Dinoseb	ND	0.024	EPA 8151	3-13-08	3-14-08	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCAA	102	44-116				

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**CHLORINATED ACID
 HERBICIDES by EPA 8151A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0313W1					
Dalapon	ND	0.23	EPA 8151	3-13-08	3-14-08	
Dicamba	ND	0.024	EPA 8151	3-13-08	3-14-08	
MCP	ND	4.7	EPA 8151	3-13-08	3-14-08	
MCPA	ND	4.7	EPA 8151	3-13-08	3-14-08	
Dichlorprop	ND	0.024	EPA 8151	3-13-08	3-14-08	
2,4-D	ND	0.47	EPA 8151	3-13-08	3-14-08	
Pentachlorophenol	ND	0.0095	EPA 8151	3-13-08	3-14-08	
2,4,5-TP (Silvex)	ND	0.024	EPA 8151	3-13-08	3-14-08	
2,4,5-T	ND	0.024	EPA 8151	3-13-08	3-14-08	
2,4-DB	ND	0.024	EPA 8151	3-13-08	3-14-08	
Dinoseb	ND	0.024	EPA 8151	3-13-08	3-14-08	
Surrogate:	Percent Recovery	Control Limits				
DCAA	97	44-116				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0313W1									
	SB	SBD	SB	SBD		SB	SBD			
Dicamba	0.830	0.854	1.00	1.00	N/A	83	85	29-121	3	20
2,4-D	0.842	0.858	1.00	1.00	N/A	84	86	47-110	2	20
2,4,5-T	0.912	0.930	1.00	1.00	N/A	91	93	61-119	2	20
2,4-DB	0.992	1.01	1.00	1.00	N/A	99	101	70-144	2	20
Surrogate:										
DCAA						97	102	44-116		

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**TOTAL METALS
EPA 6010B/7471A**

Date Extracted: 3-13&14-08
Date Analyzed: 3-13&17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-076-03
Client ID: B-4_8

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Barium	6010B	33	2.7
Cadmium	6010B	ND	0.55
Chromium	6010B	18	0.55
Lead	6010B	ND	5.5
Mercury	7471A	ND	0.27
Selenium	6010B	ND	11
Silver	6010B	ND	0.55

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**TOTAL METALS
EPA 6010B/7471A**

Date Extracted: 3-13&14-08
Date Analyzed: 3-13&17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-076-09
Client ID: B-5_11

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Barium	6010B	34	2.9
Cadmium	6010B	ND	0.57
Chromium	6010B	26	0.57
Lead	6010B	ND	5.7
Mercury	7471A	ND	0.29
Selenium	6010B	ND	11
Silver	6010B	ND	0.57

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**TOTAL METALS
EPA 6010B/7471A**

Date Extracted: 3-13&14-08
Date Analyzed: 3-13&17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-076-10
Client ID: B-5_12

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Barium	6010B	39	2.8
Cadmium	6010B	ND	0.57
Chromium	6010B	30	0.57
Lead	6010B	ND	5.7
Mercury	7471A	ND	0.28
Selenium	6010B	ND	11
Silver	6010B	ND	0.57

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**TOTAL METALS
EPA 6010B/7471A
METHOD BLANK QUALITY CONTROL**

Date Extracted: 3-13&14-08
Date Analyzed: 3-13&17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0313S2&MB0314S2

Analyte	Method	Result	PQL
Arsenic	6010B	ND	10
Barium	6010B	ND	2.5
Cadmium	6010B	ND	0.50
Chromium	6010B	ND	0.50
Lead	6010B	ND	5.0
Mercury	7471A	ND	0.25
Selenium	6010B	ND	10
Silver	6010B	ND	0.50

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**TOTAL METALS
 EPA 6010B/7471A
 DUPLICATE QUALITY CONTROL**

Date Extracted: 3-13&14-08
 Date Analyzed: 3-13&17-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-087-19

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	13.7	13.0	5	10	
Barium	87.8	84.6	4	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	35.0	33.0	6	0.50	
Lead	13.5	15.1	12	5.0	
Mercury	ND	ND	NA	0.25	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	0.50	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**TOTAL METALS
 EPA 6010B/7471A
 MS/MSD QUALITY CONTROL**

Date Extracted: 3-13&14-08
 Date Analyzed: 3-13&17-08

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 03-087-19

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	103	90	105	91	2	
Barium	100	185	97	193	105	5	
Cadmium	50	47.6	95	48.2	96	1	
Chromium	100	129	94	128	93	0	
Lead	250	244	92	267	102	9	
Mercury	0.50	0.494	99	0.504	101	2	
Selenium	100	87.5	87	88.3	88	1	
Silver	25	21.9	88	22.1	88	1	

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**TOTAL METALS
EPA 200.8/7470A**

Date Extracted: 3-17&19-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-076-13
Client ID: EB-1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.3
Barium	200.8	ND	28
Cadmium	200.8	ND	4.4
Chromium	200.8	ND	11
Lead	200.8	ND	1.1
Mercury	7470A	ND	0.50
Selenium	200.8	ND	5.6
Silver	200.8	ND	11

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**TOTAL METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL**

Date Extracted: 3-17&19-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0317W1&MB0319W1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.3
Barium	200.8	ND	28
Cadmium	200.8	ND	4.4
Chromium	200.8	ND	11
Lead	200.8	ND	1.1
Mercury	7470A	ND	0.50
Selenium	200.8	ND	5.6
Silver	200.8	ND	11

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**TOTAL METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL**

Date Extracted: 3-17&19-08
Date Analyzed: 3-18&19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-076-13

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.3	
Barium	ND	ND	NA	28	
Cadmium	ND	ND	NA	4.4	
Chromium	ND	ND	NA	11	
Lead	ND	ND	NA	1.1	
Mercury	ND	ND	NA	0.50	
Selenium	ND	ND	NA	5.6	
Silver	ND	ND	NA	11	

Date of Report: March 25, 2008
 Samples Submitted: March 12, 2008
 Laboratory Reference: 0803-076
 Project: 8915 162890

**TOTAL METALS
 EPA 200.8/7470A
 MS/MSD QUALITY CONTROL**

Date Extracted: 3-17&19-08
 Date Analyzed: 3-18&19-08

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 03-076-13

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	110	113	102	113	103	0	
Barium	110	116	106	115	104	1	
Cadmium	110	114	103	119	108	4	
Chromium	110	112	102	113	103	1	
Lead	110	112	102	112	102	0	
Mercury	12.5	11.8	94	12	96	2	
Selenium	110	119	109	116	105	3	
Silver	110	108	98	113	103	5	

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A**

Date Extracted: 3-24-08

Date Analyzed: 3-24-08

Matrix: Soil

Units: mg/kg (ppm)

Client ID	Lab ID	Result	PQL
B-4_8	03-076-03	ND	1.1
B-5_11	03-076-09	ND	1.1
B-5_12	03-076-10	ND	1.1

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
METHOD BLANK QUALITY CONTROL**

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0324S1

Analyte	Method	Result	PQL
Hexavalent Chromium	7196A	ND	1.0

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
DUPLICATE QUALITY CONTROL**

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-062-05

Analyte	Sample Result	Duplicate Result	RPD	Flags	PQL
Hexavalent Chromium	ND	ND	NA		1.0

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
MS/MSD QUALITY CONTROL**

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-062-05

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	5.0	4.76	95	4.57	91	4	

Date of Report: March 25, 2008
Samples Submitted: March 12, 2008
Laboratory Reference: 0803-076
Project: 8915 162890

% MOISTURE

Date Analyzed: 3-12-08

Client ID	Lab ID	% Moisture
B_4_3	03-076-01	11
B-4_6	03-076-02	11
B-4_8	03-076-03	9
B-5_3	03-076-04	7
B-5_6	03-076-05	10
B-5_7	03-076-06	9
B-5_8	03-076-07	4
B-5_9	03-076-08	4
B-5_11	03-076-09	13
B-5_12	03-076-10	12



Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z - Analyte may have been introduced by an outside source. See case narrative.

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference



OnSite
Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company:

AMEC

Project Number:

8915 163410

Project Name:

SPU No Transfer Station

Project Manager:

Cherilyn Inayre

Sampled by:

HV

Chain of Custody

Page 1 of 2

Turnaround Request
(in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
(TPH analysis 5 working days)
☐ (other)

Laboratory Number: 03-076

Requested Analysis

Company: AMEC		Project Number: 8915 163410		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day																
		Project Name: SPUL No Transfer Station		<input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day																
		Project Manager: Cherilyn Inge		<input checked="" type="checkbox"/> Standard (7 working days)																
		Sampled by: HV		(TPH analysis 5 working days)																
				<input type="checkbox"/> (other)																
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture	
1	B-4-3	3/11/8	800	S	1									X	X	X				
2	B-4-6		810	I	5		X	X	X											
3	B-4-8		820	I	2						X					X				
4	B-5-3		1200	S	1								X	X	X					
5	B-5-6		1210	S	5		X	X	X											
6	B-5-7		1215	S	5		X	X	X											
7	B-5-8		1220	I	1						X									
8	B-5-9		1225	I	1						X									
9	B-5-11		1240	I	1															
10	B-5-12		1245	I	1															

Hex chrome

Signature

Company

Date

Time

Comments/Special Instructions:

Relinquished by	Antonia Vin	AMEC	3/12/08	1015	Added 3/14/08 - DB
Received by	Cherilyn	DBE	3/12/08	1015	
Relinquished by					
Received by					
Relinquished by					
Received by					
Reviewed by/Date					Chromatograms with final report <input type="checkbox"/>

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy



Page 2 of 2

Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company:

Project Number:

Project Name:

Project Manager:

Sampled by:

(Check One)

☐ Same Day☐ 1 Day

2 Day

☐ 3 Day

☒ Standard (7 working days)

(TPH analysis 5 working days)

(other)

[illegible]

Signature	Company	Date	Time	Comments/Special Instructions:
Relinquished by	Amtrak	3/14/08	1015	ⓧ Added 3/14/08 . D3
Received by	Amtrak	3/14/08	1015	
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date	Reviewed by/Date			Chromatograms with final report <input type="checkbox"/>

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy